Approved by the Pakistan Medical & Dental Council
&
Index Medicus for the Eastern Mediterranean Region

Published by: Prof.Abdul Aziz for Prof.F.U.Baqai, Baqai Postgraduate Medical Institute, IIIC, 1/12, Nazimabad, Karachi
Address for correspondence: Prof. Abdul Aziz, Executive Editor JSP College of Physicians and Surgeons Pakistan, 7th Central Street, DHA, Karachi-75500
Ph: 5881222, 5892801. Ext: 301
E-mail: jamjim88@yahoo.com
Subscription rates: Per copy-in Pakistan Rs.100/= in SAARC countries U.S. $20, in other countries U.S.$30. Annual- in Pakistan Rs.300/= in SARRC countries US $ 60, in other countries U.S.$90.

Design & Layout by : Aleemuddin Siddiqui
Compose by: Kazi Abdul Wahid
Published at: DAWN Printing Press,Karachi
Ph: 8607042

ISSN 1817 - 0242

VOL. 10 NO. 4 (OCTOBER — DECEMBER 2005) **QUARTERLY**

JSP JOURNAL OF SURGERY PAKISTAN INTERNATIONAL

EDITORIAL		
Natural Disaster Management Plan: Future Directions	*Jamshed Akhtar*	1
ORIGINAL ARTICLES		
The Management of Myopic Macular Hole Without Retinal Detachment	*Abdul Rasheed Khokhar*	2
Two Stage Management of Patients with Hirschsprung's Disease	*Kifayat Khan*	7
Management of Pregnancy With Ovarian Tumour	*Ghufrana Umer Memon*	11
Presentation, Management and Outcome of Mastalgia	*Asma Muhammad Hanif*	15
Neonatal Sepsis In NICU: Bacterial Isolates and Their Sensitivity Pattern	*Rehana Akhtar*	18
Risk Factors for Tubal Ectopic Pregnancy	*Rumina Tabassum*	22
Frequency of Carcinoma In Specimens of Clinically Benign Enlarged Prostate	*Waseem Yar Khan*	26
Abdominal Wound Dehiscence: Frequency And Risk Factors	*Muhammad Saleem Shaikh*	30
Vaginal Birth After Caesarean Section	*Ghufrana Umer Memon*	34
Comparison of Complications Between Mayo's Repair and Mesh Repair (Pre-Peritoneal Approach) For Para-Umbilical Hernia	*Nur Saeed*	38
Presentation of Enlarged Lymph Nodes	*Shahida Parveen Afridi*	41
SURVEY REPORT		
Knowledge, attitudes and practices regarding breast cancer screening in women of various social strata	*Asim Jaffary*	44
EVIDENCE BASED REPORT		
Gastric Outlet Obstruction	*Mahmood Yousuf*	48
Cryosurgery In Chronic Fissure-in-ano; A Clinical Trial	*Abdul Qadeer*	51
CASE REPORT		
Neonatal Intussusception: A rare entity	*Anwar Arain*	53
CONTENT INDEX 2005		55

EDITORIAL:

EARTHQUAKE IN PAKISTAN: THE WAY FORWARD!

Many weeks have passed since the earthquake of 7.6 magnitude on Richter scale hit northern areas of Pakistan and Azad Kashmir. Till date more than 73,000 deaths have been confirmed with thousands sustaining injuries and millions rendered homeless. The direction of relief work has also changed its path, from one of rescue and acute trauma management to that of rehabilitation and care of aftermath of injuries and infectious diseases epidemic. The health providers have experienced for the first time a natural calamity for which they were not prepared. Although the dedication and devotion towards humanity was highly commendable but the lack of co-ordination and un-preparedness for dealing with such disaster is regrettable.

Many lessons are learned from this experience. Preparation of comprehensive natural calamity management plan is the need of the hour. The most important aspect to be remembered in this regard is our unique geo-social set up. First step in this direction would be a gathering at national level, of all the health care providers, including planners, NGOs, medical educationists, representatives of nursing and paramedical staff, volunteers etc who have participated in the relief efforts, to prepare a draft, based upon their experiences in the management of trauma victims. Many issues will be revealed and this will help in defining effective strategy for the future. Any imported plan in this regard would be a disaster.

We encourage those who have participated in rescue efforts, to write scientific papers related to injuries they dealt with. Their suggestions in this regard would be of enormous help to the planners. A change in curriculum incorporating management of trauma victims on mass scale for medical, nursing and paramedical students should be made. Workshops and hands-on training would be of an immense importance. A certificate of successful attending of such workshops and re-certification at 2-3 years interval should be stressed upon. With our coordinated approach we can reduce the mortality and morbidity in the wake of natural disaster in future.

DR. JAMSHED AKHTAR
Associate Editor

THE MANAGEMENT OF MYOPIC MACULAR HOLE WITHOUT RETINAL DETACHMENT

ABDUL RASHEED KHOKHAR

ABSTRACT

Objective

To evaluate the anatomic and functional outcome of vitreoretinal surgery in eyes with pathologic myopia and macular hole and to determine if surgery improves visual acuity.

PATIENTS & METHODS

Twenty-four consecutive highly myopic eyes with full-thickness macular hole without posterior retinal detachment, were treated by vitrectomy. Posterior hyaloid dissection, removal of epiretinal and internal limiting membranes (ILM) if thickened, instillation of platelet concentrate, and flushing with 25% sulfur hexafluoride were performed.

Results

Patients` refractive error ranged between –8.0 and –17.5 diopters, and axial length ranged form 27.1 to 31.4 mm. Two epimacular membranes and 10 macular ILM were removed. Ten patients also underwent phacoemulsification and intraocular lens implantation at the same procedure. Mean preoperative best-corrected visual acuity was 20/200. Successful and anatomic macular hole closure occurred 6 months postoperatively in 100% of eyes after one (21 eyes, 87.5%) or two surgeries (3 eyes, 12.5%). Visual acuity improved three or more lines in 83.3% of patients. Mean postoperative visual acuity was 20/70. No retinal detachment was observed during the follow-up period, which ranged from 12 to 45 months.

Conclusion:

Our results suggest that vitreoretinal surgery may effectively manage myopic macular holes, thus improving anatomic and visual outcomes. By closing the hole, vitreoretinal surgery may decrease the risk of posterior retinal detachment in highly myopic eyes.

KEY WORDS:- *Myopia, Macular hole, Vitreonretinal surgery*

INTRODUCTION

Severely myopic individuals are known to be at high risk for the development of macular holes. The high incidence of myopic macular holes is probably the result of vitreous changes that stimulate focal shrinkage of the prefoveolar vitreous cortex[1]; staphyloma formation, which accentuates the stretching of the posterior pole and causes thinning of the retina and flattening of the macular area; and chorioretinal atrophy at the posterior pole, produced by relative chorioretinal ischemia.

Correspondence:
Abdul Rasheed Khokhar
Consultant Ophthalmologist
Karachi.

Patients with macular hole and pathologic myopia (spherical equivalent of –8.0 diopters [D] or greater) have a high risk of posterior retinal detachment (RD),[2-6] defined as extending beyond the cuff of subretinal fluid. The risk increases in patients with posterior staphyloma, posterior chorioretinal atrophy, and posterior vitreous detachment (PVD).[4,6] Such RD rarely develops in idiopathic macular hole cases, most of which have mild to moderate refractive errors. The aim of our study was twofold: to determine if vitreoretinal surgery without laser retinopexy could increase visual acuity (VA) in eyes with pathologic myopia and macular hole and to determine the risk of RD in these eyes that underwent surgery.

PATIENTS AND METHODS

Twenty-four patients were treated out of a series of 42 consecutive patients who presented with a myopic macular hole between 1999 and 2004. Inclusion criteria were myopia higher than – 8.0 D and the presence of a full-thickness macular hole without RD. The 16 eyes that were not included had one or more of the following exclusion criteria: previous surgery for RD resulting from peripheral breaks (6 cases), a history of trauma (4 cases), lacquer cracks involving the macular area (4 cases), and subfoveal neovascular membrane (5 cases). All patients provided informed consent. Preoperative data recorded from the patients included age, eye affected, sex, duration of symptoms, refraction, axial length, and Snellen VA. All 24 eyes underwent indirect opthalmoscopy and indirect slit-lamp examination, including biomicroscopy of the vitreous and retina. The horizontal diameter of the hole was measured over the digital image obtained by the Topcon fundus camera and the Imagenet (Topcon Corporation, Tokyo, Japan). Best-corrected VA was measured before surgery and[2,6,12,24], and 45 months postoperatively with Snellen charts. The final VA was considered to be that measured at 6 months postoperatively. In addition, preoperative refraction and axial lengths were measured, and B-mode echography was performed using tridimensional echography (OTI, Toronto, Canada). Posterior vitreous detachment was defined as the presence of a Wesis ring. The presence of a posterior staphyloma was determined by fundus examination and B-mode echography.

Patients were fully informed of all relevant aspects of the procedure. All patients were operated on by the same surgeon. A three-port pars plana vitrectomy was performed in all cases. All patients were phakic, and 10 patients presented with nuclear or subcapsular characters. The cataracts were removed by phacoemulsification followed by intraocular lens implantation before pars plana vitrectomy. If the cortical vitreous was adhered to the posterior pole, the posterior hyaloid was separated form the retina using the vitrectomy instrument or a silicone-tipped cannula under active aspiration, beginning with dissection over the optic disk or the temporal vascular arcade, and then removed. If an epiretinal membrane was found, it was dissected form the retina. Dissection of the internal limiting membrane (ILM) was performed according to clinical and intraoperative findings. If thickening and/or wrinkling of the ILM was observed, it was dissected form the retina using a hooked microblade to open a dissection plane between the membrane and the retina, usually halfway between the macular hole and the superior temporal arcade. A thin spatula (Thomas Rice, Synergetics Inc., St. Charles, MN) was used to lift the ILM from the retina, and diamond-dusted forceps (Grieshaber, Schaffhausen, Swizerland) or Tano Forceps (Synergetics Inc.) were used to remove it from the retina. A membranorhexis i.e., a circular and continuous aperture of the ILM, was performed around the macula, obtaining a 3- to 4-mm concentric area free of ILM. After removing the macular ILM, the fluid was exchanged by air, followed by instillation of 0.1 ml of autologous platelet concentrate over the macular hole.[7,8] At the end of surgery, the globe was flushed with 25% sulfur hexafluoride. Patients were instructed to maintain a strict face-down position for 1week postoperatively.

RESULTS

The patients (18 women, 6men), who ranged in age from 25 to 66 years (mean, 40 years), were observed form 12 to 45 months postoperatively (mean follow-up period , 25.5 months). The preoperative best-corrected VA levels ranged from counting fingers to 20/60 (mean, 20/200). Patient demographic data is listed in Table I.

Each patient had a symptomatic decrease of VA in the affected eye with central scotoma or metamorphopsia of less than 1 year duration. Opthalmoscopic examination at the level of the macular area showed a full-thickness macular hole with a ring of retinal edema. The horizontal diameter of the hole ranged between 400 and 600 mm.

The mean axial length of the eyes was 28.75 mm (range, 27.1-31.4 mm). Five patients had a marked posterior staphyloma that involved the macular and the optic disk. Well-defined chorioretinal atrophy that involved the macular area was found in two eyes. Three patients had previously undergone treatment for peripheral retinal breaks without RD with diode laser photocoagulation.

Ten patients also underwent cataract extraction immediately before vitreorentinal surgery, at the same procedure. A three-port pars plana vitrectomy was performed in each patient, and in 12 a complete posterior hyaloid attachment was observed and dissected. Two

TABLE-I **PATIENT DEMOGRAPHICS**

Case No./Eye	Patient Age,yr	Refraction (Diopters)	Axial Length	PVD	Cataract Surgery	ILM/ERM Removal	MH Closure	Preop VA	Postop VA(6 mo)	Posterior Staphyloma	RPE Atrophy	Follow-up (mon)
1/R	28	-10	28.1	Y		ILM	Y	20/200	20/50	+	+	14
2/R	29	-9.5	28.02	Y		ILM	Y	20/400	20/60	+	-	22
3/R	36	-8.5	28.3	N			Y	20/100	20/30	+	-	36
4/L	52	-13	30.3	Y	PE + IOL	ERM	Y	CF	20/400	+	+	28
5/L	41	-16	31.0	Y	PE + IOL	ILM	Y	CF	20/200	+	+	32
6/R	45	-17.5	31.4	Y			N*	20/400	20/100	+	+	28
7/R	66	-12	29.1	Y	PE + IOL	ILM	Y	20/400	20/60	+	+	35
8/R	33	-8.5	28.0	N			Y	20/80	20/30	+	-	29
9/R	36	-8.5	28.1	N		ILM	Y	20/100	20/40	+	+	31
10/R	41	-8.25	27.5	N			Y	20/60	20/30	-	-	12
11/L	48	-9	28.3	N			N*	20/100	20/50	+	+	40
12/R	25	-10.5	28.9	Y	PE + IOL	ERM	Y	20/200	20/50	+	+	25
13/L	29	-8	27.8	N		ILM	Y	20/100	20/60	-	+	28
14/R	49	-11	29.0	Y	PE + IOL		N*	20/100	20/60	+	+	16
15/L	35	-10	28.6	N			Y	20/200	20/80	-	+	12
16/L	39	-13	30.2	Y	PE + IOL	ILM	Y	20/80	20/50	+	+	23
17/L	61	-8.5	27.8	N			Y	20/200	20/40	-	-	45
18/R	44	-9	28.0	N	PE + IOL		Y	20/400	20/100	+	+	33
19/L	34	-8	27.1	N			Y	20/80	20/30	-	+	22
20/R	38	-15	31.2	Y	PE + IOL	ILM	Y	20/400	20/80	+	+	17
21/R	43	-12	29.1	Y	PE + IOL	ILM	Y	20/200	20/60	+	+	18
22/L	39	-11	28.9	Y	PE + IOL	ILM	Y	20/200	20/50	+	+	15
23/R	41	-8	27.5	N			Y	20/80	20/40	-	+	25
24/L	40	-8.25	27.8	N			Y	20/100	20/40	-	-	37

*Macular hole (MH) closed after second surgery.

eyes had a definite epimacular membrane that was removed. The ILM, which was thickened around the macular hole, was dissected and removed in 10 patients. All the patients had platelet concentrate placed in the macular hole. In three patients, endophotocoagulation was applied to peripheral lattice degeneration.

Macular hole closure was achieved 1 month postoperatively in 21 eyes (87.5%). Three eyes with a persistent macular hole after the initial procedure underwent another surgery with dissection of the ILM as described previously, instillation of platelet concentrate in the macular hole, and retinal tamponade with 15% perfluorocarbon. Macular hole closure was achieved in all eyes that underwent a second surgery, increasing the rate of anatomic success to 100% at the 6-month follow-up examination. We did not observe reopening of the hole in any patient.

PVD, posterior vitreous detachment; ILM, inner limiting membrane; ERM, epiretinal membrane; VA, visual acuity; RPE, retinal pigment epithelium; PE, phacoemulsification; IOL, intraocular lens; CF, counting fingers.

Ten patients underwent surgery for postoperative cataracts by phacoemulsification and intraocular lens implantation without complications. Four months postoperatively, one patient developed a peripheral RD produced by a horseshoe tear in the superotemporal quadrant, without macular involvement. The retina was reattached using a 2.5-mm scleral buckle, cryocoagulation to the tear, and anterior chamber paracentesis with aspiration of 0.3 cc of aqueous humor, and 0.5 cc of pure octofluoropropane was injected.

The VA improved a mean of three or more lines of Snellen equivalent in 83.3% of eyes. The mean postoperative VA was 20/70 (range, 20/30-20/400). Twelve months postoperatively, follow-up information was available for all 24 cases.

DISCUSSION

After the follow-up period, no posterior RD resulting form a macular hole has been observed in any study eye, which implies an important decrease in the rate of RD resulting form a macular hole in these patients with high myopia.[2-6] Morita et al[4] found that the risk of RD in 209 eyes with a myopic macular hole increased to 97.6% of cases if the myopia exceeded – 8.25 D. Other factors that these authors found, to be directly related to RD in macular holes, were the presence of a posterior staphyloma and widespread posterior chorioretinal atrophy. The percentage of RD decreased form 96% in eyes with the posterior staphyloma to 8.2% in eyes

without posterior staphyloma, and form 90.6% in eyes with posterior choriorentinal atrophy to 0% in eyes without myopic tigroid fundus or atrophy. Akiba et al[6] found that extensive RD developed in 95% of eyes with macular holes and myopia exceeding —6 D when a posterior staphyloma was present and in only 7% of eyes if a posterior staphyloma was not present. Extensive RD also developed in 89% of eyes with complete PVD versus 31% without PVD. This different rate of RD related to the status of the posterior vitreous was not correlated in the study of Morita et al,[4] who observed RD in 56% of eyes with a myopic macular hole with a myopic with PVD versus 51.9% in eyes without PVD.

Considering that 70.8% of the eyes in our study had posterior staphyloma, 75% of the eyes had posterior choriorentinal atrophy, 50% of the eyes had PVD, and all the eyes had 8 or more D of myopia, the risk factors for developing a RD were high, but no RD was observed in the postoperative period. By closing the hole, vitreoretinal surgery may decrease the risk of posterior RD in highly myopic eyes.

The treatment for RD resulting from a myopic macular hole has been debated for decades. Before the introduction of pars plana vitrectomy, the available therapies were macular buckling and a method of retinopexy, with cryocoagulation,[9] diathermy,[10] or photocoagulation.[3] Some of these techniques, however, caused considerable complications, and the extensive scarring in the macula produced subsequent visual loss. Gas tamponade with or without pars plana vitrectomy is effective in cases or RD resulting from a myopic macular hole,[11-13] but was less effective in cases with chorioretinal atrophy, posterior staphyloma, or both.[11] In those cases, the addition of retinopexy was necessary to close the hole, producing a permanent visual loss. However, even after retinopexy, retinal redetachment frequently occurs.[1416] Bonnet and Semiglia observed late recurrences (between 7 and 78 months postoperatively) of myopicmacular holes after successful surgery for RD resulting from macular hole. Wolfensberger and Gonvers,[15] who recognized the high rate of retinal redetachment if laser photocoagulation was not performed around the macular hole in eyes with chorioretinal atrophy or posterior staphyloma, used mild laser photocoagulation and silicone oil to obtain macular hole tamponade of longer duration. Those investigators obtained a final successful retinal reattachment of 91%, and they removed the silicone oil after a mean of 3 months postoperatively.

We chose a group of patients with a myopic macular hole without RD to investigate the effect of surgery on the VA and the incidence of postoperative RD. Three of the 24 patients (12.5%) had a persistent macular hole and underwent a second surgery. We believe that it is important to close the macular hole in these eyes because of the possible increase in risk of RD induced by the surgery. The technique used in these eyes was different than that used in the initial surgery; the ILM was dissected and a gas tamponade of longer duration than in the initial surgery was used, because we suspected that the patients did not maintain a prone position of sufficiently long duration postoperatively. Because we obtained anatomic macular hole closure in the three eyes that underwent a second surgery, and VA recovery was similar to that in the patients who underwent only one surgery, we now dissect the ILM in every eye that undergoes surgery for a myopic macular hole.

Some authors have emphasized the importance of the tangential traction of epirentinal membranes as a cofactor in the pathogenesis of macular holes and subsequent RD.[16-18] Stripe and Michels[17] treated four highly myopic eyes with recurrent RD resulting from macular hole and found a thin layer of epiretinal tissue over the posterior retina in each eye, correlating it with the recurrence of the RD. Oshima et al[19] observed a high incidence of epiretinal membranes in myopic macular holes with RD (17.6% preoperatively and 100% intraoperatively). We found only two patients with an obvious epiretinal membrane exerting traction over the macular hole. The presence of an epiretinal membrane should alert surgeons to the increased risk of RD in patients with a myopic macular hole. However, it is difficult to know if the epertinal membrane is a cofactor in the pathogenesis of RD in these patients, or if the epiretinal membrane is secondary to the posterior RD and produced by the migration of rentinal pigmented epithelium cells to the vitreous cavity, as an incipient proliferative vitreoretinopathy.

In 10 patients we removed a thickened ILM. The concept of dissecting the ILM is relatively new, and some epimacular tissues removed in previous reports could be related to the thickened ILM. We identified the thickened ILM by biomicroscopy and fundus contact lens, and during vitrectomy by the wrinkling, glistening tissue around the macular hole. The dissection of the ILM confirmed the differences form epirentinal membrane: we obtained a clear, reflective, transparent, elastic tissue that did not have a clear border, and after dissection, the surface was regular. We need to perform a membranorhexis, because the tissue covered the whole posterior retina and was thicker near the optic nerve.

The incidence of cataract in myopic patients is relatively high.[19] When a posterior subcapsular cataract is present, it is difficult to visualize the macular area and perform delicate maneuvers such as dissection of the ILM. This difficulty is increased by the longer axial length of myopic eyes. The incidence of postoperative cataract after

vitreorential surgery using gas tamponade is almost 100% in 5 years of follow-up.[20-21] These were the main reasons for performing combined phacoemulsification and vitrectomy. After cataract removal, macular visualization increases and facilitates posterior segment surgery.

When a patient with myopia presents with decreased Van, central scotoma, and some degree of metamorphopsia, the first diagnosis that we consider is submacular neovascular membrane. However, in some cases, the cause is macular hole that is difficult to visualize when chorioretinal atrophy and macular staphyloma are present; therefore, in the absence of a neovascular membrane, a careful biomicroscopic examination is mandatory, because if a macular hole is vitreoretinal surgery, those patients may achieve increased vision. By closing the macular hole, the risk of posterior RD seems to decrease, compared to historical controls.[2-6] Further investigations in a randomized trial and a longer follow-up than in the current study are needed to determine if vitreorential surgery is indicated to treat every case of myopic macular hole.

REFERENCES

1. Kokame GT. Early stage of macular hole in a severely myopia eye. Am J Ophthalmol 1995;119:240-242.
2. Philips CI, Dobble JG. Posterior staphyloma and retinal detachment. Am J Opthalmol 1963;55:332-335,
3. Siam AL. Macular hole with central retinal detachment in high myopia with posterior staphyloma. Br J Ophthalmol 1969;53:62-63.
4. Morita H, Ideta H, Ito K. Causative factors of retinal detachments in macular holes. Retina 1991;11:281-284.
5. Takano M, Kishi S. Foveal retinoschists and retinal detachment in severely myopic eyes with posterior staphyloma. Am J Ophthalmol 1999; 128:472-476.
6. Akiba J, Konno S, Yoshida A. Retinal detachment associated with a macular hole in severely myopia eyes. Am J Ophthalmol 1999;128:654-655.
7. Heyns AD, Badenhorst PN, Pieters H. Preparation of a viable population of indium-111 labeled human blood platelets. Thromb Haemost 1979;42:1473-1482.
8. Sinzinger H, Kolbe H, Strobl-Jager E, Hofer R. A simple and safe technique for sterile autologous platelet labeling using "monovette" vials. Eur J Nucl Med 1984;9:320-322.
9. Harris GS. Treatment of retinal detachments due to macular holes. A silicone sponge explant technique. Mod Probl Ophthalmol 1974;12:337-341.
10. Adams ST. Retinal detachment due to macular and small posterior holes. Arch Ophthalmol 1961;66;528-533.
11. Gonvers M, Machemer R. A new approach to treating retinal retinal detachment with macular hole. Am J Ophthalmol 1982;94:468-472.
12. Garcfa-Arumi J. Correa CA, Corcostegui B. Comparative study of different techniques of intraocular gas tamponade in the treatment of retinal detachment due to macular hole. Ophthalmologica 1990;20;83-91.
13. Pernot A, Fleury J, Nbonnet M. Retinal detachment caused by macular holes in patients with severe myopia; results of intravitreal injection of pure C3 F8. J Fr Ophthalmol 1996;19:491-495.
14. Bonnet M, Semiglia R. Late recurrences after successful surgery for retinal detachment with macular hole, Graefes Arch Clin Exp Ophthalmol 1993; 231:347-350.
15. Wolfensberger Tj, Gonvers M. Long-term follow-up of retinal detachment due to macular hole in myopic eyes treated by temporary silicone oil tamponade and laser photocoagulation. Ophthalmology 1999;106:1786-1791.
16. Seike C, Kusaka S, Sakagami K, Ohashi Y. Reopening of macular holes in highly myopic eyes with retinal detachments Retina 1997;17:2-6.
17. Stripe M, Michels RG. Retinal detachment in highly myopic eyes due to macular holes and epiretinal traction, Retina 1990;10:113-114.
18. Oshima Y, Ikuno Y, Motokura M. Complete epiretinal membrane separation in highly myopic eyes with retinal detachment resulting from a macular hole. Am J Ophthalmol 1998;126:669-676.
19. Lim R, Mitchell P, Cumming RG. Refractive associations with cataract: The Blue Mountains Eye Study. Invest Ophthalmol Vis Sci 1999;40:3021-3026.
20. Thompon JT. Glaser BM, Sjaarda RN, Murphy RP. Progression of nuclear sclerosis and long-term visual results of vitrectomy with transforming growth factor beta-2 for macular holes. Am J Ophthalmol 1995;119:48-54.
21. Grusha YO, Masket S, Miller KM, Phacoemulsification and lens implantation after pars plana vitrectomy. Ophthalmology 1998;105:287-294.

TWO STAGE MANAGEMENT OF PATIENTS WITH HIRSCHSPRUNG'S DISEASE

KIFAYAT KHAN

ABSTRACT

Objective *To find the outcome of Duhamel procedure in patients with Hirschsprung's disease.*

Design of Study: *Interventional study.*

Place and Duration of Study

At the Department of Paediatric Surgery PGMI / Lady Reading Hospital, Peshawar, from January 2003 to December 2004.

Patients and Methods

Twenty patients with Hirschsprung's disease managed over a period of 2 years were included. Diagnosis was established by barium enema and open rectal biopsy. Colostomy was dismantled in all patients and brought down as a pull through gut in a modified Duhamel procedure using a linear cutter (TLC-75). No colostomy cover was provided and the rectum was drained with a big size (30 Fr) flatus tube along with nasogastric suction for 2-3 days. Any complication encountered during the hospital stay was recorded. After discharge patients were followed up in the outpatient department and they were clinically assessed for constipation, diarrhoea, faecal continence etc.

Results: *There were 15 male and 05 female patients. Age ranged form 12 months to 05 years. All patients had sigmoid colostomy after confirmation with conventional rectal biopsy. There was no mortality in this study. Wound infection occurred in 05 patients. Persistent pyrexia and prolonged hospital stay for more than 10 days was seen in 02 patients. One patient developed incisional hernia while perineal excoriation developed in two patients. Recurrent diarrhoea and perineal soiling found in 02 and 01 patients respectively. All patients are thriving well with no case presenting with enterocolitis uptil now. There was not a single patient with anal stenosis needing anal dilatation.*

Conclusion: *Two-stage correction of Hirschsprung's disease is a safe procedure in all age groups. It is economical with social advantages to the parents, as the stage of colostomy closure is avoided with elimination of the possible complications associated with stoma and its closure. Utilization of the stoma to become part of the pull through gut gives an additional advantage of avoiding the need for frozen section biopsy, a facility which is lacking in our set up. From these preliminary data we conclude and suggest that modified Duhamel procedure without covering colostomy is a safe procedure with minimal complications and good results.*

KEY WORDS:- *Modified Duhamel procedure, Hirschsprung's disease.*

Correspondence:
Dr. Kifayat Khan
Department of Paediatric Surgery
PGMI / Lady Reading Hospital,
Peshawar.

INTRODUCTION

The conventional way of treating patients with Hirschsprung's disease by Swenson, Duhamel and Soave pull-through procedure is well established and widely practiced throughout the world[1]. Various modifications have been adopted in the conventional procedures, which

are gaining popularity with acceptable results in the recent years[2]. Primary pull through procedures, transanal pull through, modified Soave and modified Duhamel procedures have been described by different authors, using minimal invasive techniques[2,3,4]. Despite the use of proper techniques, new modifications and minimal invasive pull through procedures, persistent constipation, faecal retention and enterocolitis still remain the major problems after the definitive treatment for Hirschsprung's disease[4,5,6]. The conventional procedures for Hirschsprung's disease are carried out in stages but with the possible potential risks at any stage. To avoid the risk of colostomy closure, which is a separate and final stage in the treatment of Hirschsprung's disease, it was felt to develop the technique of two-stage Duhamel procedure instead of three-stage procedure and to analyze the outcome of this procedure in our setup.

PATIENTS AND METHODS

Twenty patients with Hirschsprung's disease were studied over a period of two years. There were managed in two stages, first colostomy and then pull through (Modified Duhamel) without covering stoma. Patients with Hirschsprung's disease and defunctioning colostomy were admitted to paediatric surgery ward through the out patients department. Distal colon washout with kleen enema was started 24 hours before surgery along with intravenous antibiotics.

Under general anesthesia, with patients in the lithotomy position, anorectal canal was examined; manual examination of the rectum was performed along with dilatation of the anal canal. Anal canal was washed with saline and cleaned with pyodine solution. Urinary bladder was drained with a urethral catheter and nasogastric tube was passed routinely in all patients. Intravenous fluids and blood was administered to all patients during the procedure. Abdomen was opened through a lower oblique incision starting from the colostomy site up to the pubic symphysis. Colostomy or ileostomy was dismantled along with resection of the distal aganglionic gut sparing the rectum.

Gut mobilization was performed in the usual manner to an adequate length that could be brought down to the anus behind the rectum without tension. The mobilized gut was pulled down through a transverse slit in the anal canal and the end stitched with the lips of the slit. Side to side anastomosis of the rectum and the pulled through colon was done with the use of a linear cutter (TLC-75). The upper end of the rectum was closed manually with silk 3/0 sutures. A big size flatus tube (30 Fr) was passed through the new anorectal canal into the colon and abdomen was closed in the usual manner.

Post-operatively the patients were put on I/V fluids and ceftriaxone, gentamycin and metronidazole for 3-5 days. After complete recovery patients were discharged home 5-7 days after operation. Any complications observed during the hospital stay were recorded and after discharge, parents were advised to bring the child to OPD for follow up.

RESULTS

Twenty patients with Hirschsprung's disease were treated with modified Duhamel procedure. There were 15 male and 05 female patients. Age ranged from 12 months to 05 years. Rectum (short segment) was involved in 02(10%) patients, 17(85%) patients had recto-segmoid and 01(5%) patient was with long segment Hirschsprung's disease.

There was no operative or post-operative mortality. Prolonged hospital stay for more than 10 days was found in 2(10%) patients due to persistent fever and wound infection. Five (25%) patients developed infection of the laparotomy wound. Perineal excoriation and recurrent diarrhoea found in 2 (10%) patients while perineal soiling and incisional hernia were observed in 01(5%) each respectively. Chronic constipation, anal stenosis, abdominal distension or enterocolitis did not occur in any patient of this series (table I).

TABLE-I COMPLICATION IN PATIENTS WITH MODIFIED DUHAMEL PROCEDURE.

Complications	Number of Patients (Percentage)
Prolonged hospital stay with persistent fever	2 (10%)
Wound infection	5(25%)
Perineal excoriation with diarrhea	2(10%)
Perineal soiling	1(5%)
Incisional hernia	1(5%)

DISCUSSION

Classically pull-through procedures were performed in stages but recently many centers have started performing pull-through procedures in one-stage[1,2]. Various modifications in the original procedure have been described in the literature to reduce the number of operations and also to eliminate the risk of complications related to colostomy and colostomy closure[1-5].

We have been performing pull-through procedures in stages in the conventional way to treat patients with Hirschsprung's disease. Several centers have reported the initial results of one-stage pull-through procedure's with minimum complications in places where the facility of frozen section biopsy is available[4,5,6,7]. In setups like ours where this facility is not available, one stage pull-through cannot be performed. However the management can be planned in such a way to reduce the number of operations. Our policy is to construct a defunctioning

colostomy just above the transition zone as a first stage after confirmation with barium enema and rectal biopsy. Despite the various innovations in the management of congenital anomalies, complications of colostomy and its closure remain high. Mortality and morbidity of colostomy closure alone varies from 0-1% and 50-55% respectively. Eliminating the stage of colostomy closure in the management of Hirschsprung's disease would definitely decrease the risks, which are associated with the closure of colostomy[9-11].

No mortality has been observed in this study which is in comparison with the world literature or even better than that[11,12,13]. Case selection, fitness for surgery and anesthesia, less operating time and control over infection in the perioperative period may be the factors improving the outcome of pull-through procedure. Postoperative care also has an impact on the outcome of this procedure with special emphasis on the fluid and electrolyte balance, correction of anemia and decompression of the bowel with nasogastric suction and flatus tube.

Although wound infection was a common observation in this study (25%) but it is comparable with the wound infection in patients with colostomy closure[11,13,14]. Reason for high rate of wound infection was due to the fact that colostomy site was utilized in the laparotomy wound leading to contamination of the wound and hence a high rate of infection was observed. Mild wound infection responded to daily dressing and stitches removal but three patients developed large abscesses in the wound with foul smelling pus and needed opening of the skin wound with drainage of the pus.

Wound infection in similar wounds like colostomy closure has been reported to be high (16-20%) in some studies but measures have been taken to reduce the rate of infection by using preoperative appropriate antibiotics and mechanical preparation of the bowel[11,15,16]. We adopted similar techniques and measures to decrease the rate of superficial and deep infection. Though the rate of superficial infection (skin wound) is high but no deep-seated pus collection was observed in this study. The two patients who had persistent fever and prolonged hospital stay were probably due to superficial wound infection that got better with drainage of the pus. One of the patients (5%) with wound infection later on developed incisional hernia an incidence, which is still high as compared to the reported incidence of 2.6% in the literature[10,11,17,18]. The high incidence of incisional hernia in this study may be due to the high rate of wound infection in these patients. These complications were observed in the initial period of the study and very soon it was felt to use the drain in the laparotomy wound with dramatic decrease in the rate of wound infection.

Procedure specific complication were rarely seen with modified Duhamel technique. Recurrent diarrhoea with perineal excoriation occurred in 2(10%) patients. It was troublesome for some time, but later on improved with the treatment of diarrhoea and local treatment of the perineal region. Perineal excoriation is associated with diarrhoea leading to frequent contamination and thus inflammation of the perineal skin. Although it is not related purely to the adopted technique of this procedure but still remains a source of morbidity in these patients[4,9,10,19,20]. Perineal soiling was seen in one patient (5%) but prolonged follow up is needed to accurately assess the significance of this troublesome feature. Soiling appeared to be a significant feature in this series. The rate of perineal soiling is less than, what is mentioned in the literature[9,21,22] but the true rate and impact of soiling will be better known with longer follow up.

Our study is a small series of patients with good early results and no post-operative constipation or enterocolitis. These observations are encouraging at present, but it is too early to definitely comment on the safety and efficacy of the procedure. To ensure safe and good outcome, close surveillance and long-term follow is needed. However from the observation of early results it is concluded that modified Duhamel procedure without covering stoma is a safe procedure with minimal complications and good results. Therefore we recommend that two-stage modified Duhamel pull-through can be performed with confidence in places where the facility of frozen suction biopsy is not available.

REFERENCES

1. Miyano T, Yamataka A, Urao M, et al. Modified Soave Pull-through for Hirschsprung's Disease. Intraoperative internal sphincterotomy. J Pediatr Surg, 1999; 34: 1599-1602.
2. Liu De, Rodriguez J, Hill CB, Lee WA Transanal mucosectomy in the treatment of Hirschsprung's Disease.. J Pediatr Surg 2000; 35: 235-8.
3. Caluwe DD, Yoneda A, Yoneda A, Akel U, Puri P. Internal anal sphincter achalasia: Outcome after internal sphincter myectomy.. J Pediatr Surg, 2001; 36: 736-8.
4. Peterlini FL, Matins JL Modified transanal rectosigmoidectomy for Hirschsprung's Disease: Clinical and manometric results in the initial 20 cases.. J Pediatr Surg 2003; 38: 1048-50.
5. Hadidi A. Transanal enderectal Pull-through for Hirschsprung's Disease: Experience with 68 Patients. J Pediatr Surg 2003; 38: 1337-40.
6. Narla LD, Elizabeth MD, Hingsbergen A Total

colonic aganglionosis, longsegment Hirschsprung's Disease.. J Pediatr Surg 2000; 215: 391-4.

7. Shah AA, Shah AV. Staged laparoscopic-assisted Pull-through for Hirschsprung's Disease.. J Pediatr Surg 2003; 38: 1667-9.

8. Elhalaby EA, Hashish A, Elbarbary M.M, Soliman H.A, Wishahy M.K, Elkholly A, Transanal one-stage endorectal pull-through for Hirschprung's disease: a multicenter study. J Pediatr Surg 2004; 39: 345-351.

9. Minford J.L, Ram.A, Turnock R.R, Lamont G.L, Kenny S.E, Rintala R.J, Lioyd D.A, and Baillie C.T Comparison of functional outcomes of Duhamel and transanal endorectal coloanal anastomosis for Hirschsprung's disease.. J Pediatr Surg 2004; 39: 161-65.

10. Wester T, Rintala R.J Early outcome of transanal endorectal pull-through with a short muscle cuff during the neonatal period.. J Pediatr Surg 2004; 39: 157-60.

11. Chandramouli.B, Srinivasan K, Jagdish.S, and Anathakrishnan N Morbidity and mortality of colostomy and its closer in children.. J Pediatr Surg 2004; 39: 596-99.

12. Jianghua Z, Yao XIU, Jiqing G Expression of RET Proto-Oncogene and GDNF deficit in Hirschsprung's Disease. J Pediatr Surg, 1999; 34: 1606-9.

13. Arbay O.C, Yildirim S, Tanel SC . The Role of nitregic system on the contractility of colonic circular smooth muscle in Hirschsprung's Disease. J Pediatr Surg, 1999; 34: 1477-81.

14. Nakao M, Suita S, Taguchi T. Fourteen-year experience of acetylcholinesterase staining for rectal mucosal biopsy in neonatal Hirschsprung's Disease.. J Pediatr Surg, 2001; 36:1357-63.

15. Gao Y, Xiansheng G. Primary transanal rectosigmiodectomy for Hirschsprung's Disease. Preliminary results in the initial 33 cases. J Pediatr Surg, 2001; 36: 1816-9.

16. Kubota A, Yamauchi K, Yonekura T. Clinicopathologic relationship of hypoganglionosis.. J Pediatr Surg 2001; 36: 898-900.

17. Cheng W, Au DKK, Hill CB Hirschsprung's Disease: A more generalised neuopathy?. J Pediatr Surg 2001; 36: 296-300.

18. Solo-RBT, Prato AP, Martucciello G, and Jasonni V: A new instrument for rectal suction biopsies in the diagnosis of Hirschsprung's Disease.. J Pediatr Surg, 2001; 36: 1364-6.

19. Sancandi M, Ceccherini I, Fava M, Chen B Incidence of RET mutations in patients with Hirschsprung's Disease.. J Pediatr Surg 2000; 35: 139-43.

20. Hippolito R, Haight M, Dubois J. Gastroschisis and Hirschsprung's Disease: A rare combination.. J Pediatr Surg 2001; 36: 638-40.

21. Shim WKT, Derieg M, Powell BR Near-total intestinal aganglionosis in the Waardenburg-Shah Syndrome. J Pediatr Surg, 1999; 34: 1853-5.

22. Baltogiannis N, Mavridis G, Soutis M Currarino triad associated with Hirschsprung's Disease.. J Pediatr Surg 2003; 38: 1086-9.

MANAGEMENT OF PREGNANCY WITH OVARIAN TUMOUR

GHUFRANA UMER MEMON, JAHAN ARA AINUDDIN

ABSTRACT

Objective *To study the maternal and fetal outcome of pregnancies complicated by ovarian tumours.*

Design *Descriptive study*

Place and Duration of Study

Gynaecology & Obstetrics Unit I, Dow University of Health Sciences and Civil Hospital Karachi, from January 2003 to December 2004.

Patients and Methods

All patients who attended the antenatal clinic and Emergency Department of Civil Hospital Karachi, Gynaecology & Obstetrics Unit I, from January 2003 to December 2004, were included in the study, if pregnancy was complicated by a coexistent ovarian tumour of > 5cm. Fetal outcome after conservative or surgical management was noted

Results: *Thirty Six patients were enrolled in the study. Twenty-seven had surgical interventions and nine were managed conservatively. All patients with conservative management were asymptomatic. Obstetric outcome revealed only one preterm delivery after conservative management but surgical intervention resulted in five abortions, three preterm and 19 term deliveries. Fetal outcome revealed comparable results in both the groups. There was only one preterm fetus in conservative group while surgically managed group produced three preterm fetuses. No still birth was noted in either group, however intra-uterine growth retardation (IUGR) found in three of the surgically managed group and one of conservative group.*

Conclusion: *Surgical intervention is a reasonable approach to deal with cases of ovarian tumours with pregnancy, but conservative management also has comparable obstetric outcome if safe selection criteria for mothers is defined*

KEY WORDS:- *Ovarian tumors, Pregnancy, Surgical management.*

INTRODUCTION

Ovarian tumours can arise from any of resident cell of ovary and shows a variable biological behavior. This may remain localized to ovarian tissues or metastasize to different parts of the body. Pregnancy is a physiological state of child bearing, that becomes a matter of pathological concern, if its gets complicated by an ovarian tumour. Therefore ovarian tumor with pregnancy not only endangers fetus but also has a potential to produce harm because of surgery and malignant change. It thus becomes a therapeutic challenge for the medical team to evaluate the necessity of immediate intervention for maternal indications versus delaying therapy for fetal indications[1]. Expectant treatment many be preferred because of concern of fetal loss or preterm delivery after operation, while elective surgery may be recommended because of fear of malignancy, adnexal torsion, cysts rupture or hemorrhage which can cause both maternal and fetal morbidity[2]. Risks / complications like

Correspondence:
Dr. Ghufarana Umer Memon
Gynaecology & Obstetrics Unit I
Dow University of Health Sciences & Civil Hospital
Karachi.

hemorrhage, torsion and suppuration must be clearly outweighed against risk of abortion if expectant versus surgical treatment is considered.

Initially the standard treatment for patients with pregnancy complicated with ovarian cysts was expectant until second trimester, followed by removal of an ovarian tumour that persists. This logical approach not only allows for resolution of most functional cysts but also skips the period during which pregnancy survival is dependent upon corpus luteum[3,4]. With current ultrasound practice, an approximately one percent detection rate of ovarian tumour is noted in pregnancy. Of all ovarian tumours noted in pregnancy, 50 percent are less than 5cm in diameter, whereas 25 percent are between 5 and 10cm, and the 25 percent are greater than 10 cm at the time of discovery[5,6,7]. In addition, 95% of these tumours are unilateral[8]. Based upon criteria, described by Bromley and Benacerraf, ultrasonography can detect a possible diagnosis of adnexal mass with fair specificity.[9]

Discovery of an ovarian tumour during pregnancy produces anxiety in patients and obstetrician alike. Some recommend surgical intervention for any mass that persists beyond 16 weeks of gestational age, others support expectant management during pregnancy. Surgical interventions are being favoured specially if done by laparoscopic approach whereas expectant treatment is being considered for asymptomatic adnexal mass, not suspected to be malignant. In setups where laparoscopy is not advanced enough to be used for therapeutic purposes and neonatal support in not very good, expectant treatment seems to be a better option. Obstetric outcome of these cases is an indirect measure of effectiveness of this management protocol.

PATIENTS & METHODS

This descriptive study was conducted at Civil Hospital Karachi over a period of two yeas from January 2003 till December 2004. During these two years 8820 pregnant ladies visited antenatal clinic and emergency ward of Gynaecology & Obstertics Unit I, Civil Hospital Karachi. The inclusion criteria was any women admitted through emergency or out patient department having an ultrasonogrpahically confirmed intrauterine pregnancy with an ovarian mass of more than 5cm, at any gestational age.

The exclusion criteria were pregnant patients will unilateral, simple cysts of <5cm disappearing before sixteen weeks of gestation. Women fulfilling the inclusion criteria were admitted according to the mode of presentation. Parameters noted included gestational age, past obstetric history, symptoms, signs and result of investigations including ultrasonographic characteristics of ovarian mass. Management either surgical or conservative was planned according to clinical situation. Maternal morbidity was assessed by duration of hospital stay, number of readmissions, nature of surgery, post operative complications and maternal health after delivery or abortion. Fetal outcome was assessed by birth weight Apgar score, gestational age at delivery and mode of delivery. The data were put in SPSS 10 programme.

RESULTS

Thirty six pregnant ladies were having a coexistent ovarian tumour over a period of 2 years. Of these thirty-six patients six (16.6%) were diagnosed in first, 20 (55.6%) in second and remaining 10 (27.77%) in third trimester of pregnancy. Only six of all these patients were received in emergency with acute abdomen. Two were diagnosed at the time of caesarean section and rest 28 were detected as an incidental findings on obstetric ultrasonography. Surgical intervention in antenatal period was planned for 27 of these patients and nine were managed conservatively. Of these 27 surgical interventions, six were done as an emergency procedure and remaining 21 as elective surgeries. The demographic features in two groups are shown in table I.

TABLE-I DEMOGRAPHIC FEATURES OF PREGNANCY WITH OVARIAN TUMOURS

Parameter	Management	
	Conservative Group n= 9 (25%)	Surgical Group n= 27 (75%)
Age	26.2	28.67
Parity	2.3	2.5
Cyst size (cm)	8.17	13.67
Gestational age at diagnosis	26.3	28.3
Term delivery	8	19
Preterm delivery	1	3
Abortion	-	5
Termination of Pregnancy	-	-
Abdominal delivery	3	9
Vaginal delivery	6	18
Mean birth weight (kg)	3.15	2.1
Prematurity	1	3
NICU admission	2	6
Neonatal deaths	-	1
Stillbirths	-	-

The study showed two main indications for surgical exploration during antenatal period, torsion and suspected malignancy. Of all surgical interventions the most commonly performed procedure was oophorectomy with LSCS. There were only minor post operative complications (Table II).

TABLE-II INDICATIONS, TYPE OF SURGERY & COMPLICATIONS IN SURGICALLY MANAGED GROUP N = 27

Indications	No.	%
Torsion (Emergency Surgery)	6	22.2
Suspected Malignancy	3	11.1
Elective Procedure	18	66.66
Type of Surgery		
Cystectomy	3	11.1
Oophorectomy	2	7.4
Oophorectomy + LSCS	13	48.14
Oophorectomy + Staging	4	14.8
Cystectomy + Staging	4	14.8
Hysterectomy + BSO +Staging	1	3.7
Complications	2	7.4
Wound Infection	3	11.1
UTI	1	3.7
Septicemia	5	18.51
Fever	18	66.66

In the surgically managed group of patients there were 3 preterm deliveries at 22,32 & 34 weeks respectively, 19 were term deliveries. Five of surgically managed patients experienced abortion, at 12-14 weeks of gestation. In all of these cases the preceding event was an emergency laparotomy in first trimester of pregnancy for suspected torsion. This is in comparison with conservatively managed group of patients where none had abortion but only one preterm delivery at 36 weeks of gestational age.

Mode of delivery was found to be vaginal in 18 of all surgically managed group, while 9 were delivered abdominally but for routine obstetric indications. However conservative management endorsed abdominal delivery in three (33.3%) and vaginal delivery in six (66.7%). Fetal outcome revealed comparable results in both the groups. No stillbirth noted in either group.

DISCUSSION

Ovarian tumours complicate pregnancy with an average estimated incidence of 1 in 1000 deliveries. In Civil Hospital Karachi Gynaecology & Obstetrics Unit 1, a total of 3820 deliveries were recorded during study period. Out of these, 36 deliveries were found to be complicated by ovarian tumour, with an incidence of 9.42 per 1000 deliveries. The incidence is higher than reported in other studies. Most of the patients in our study were diagnosed in 2nd trimester of pregnancy (57.6%) followed by 30.7% in third and 11.5% in first trimester of pregnancy. In majority of cases, coexistence of an ovarian tumour during pregnancy remained unrecognized until on obstetric ultrasonography or an abdominal delivery revealed it as an incidental finding. Basts A and colleagues demonstrated 25% of all pregnant ladies with an ovarian tumour to be symptomatic[12]. The traditional and historic teaching in obstetrics has been that any adnexal mass of more than 5 cm in diameter, diagnosed during pregnancy, should be removed as early as possible irrespective of the gestational age[13], later on trends changed to wait for second trimester for doing elective surgery of an ovarian mass that persisted beyond sixteen weeks of gestational age[14] but now, current approach is to manage these cases expectantly especially when mass is not suspected of malignancy. If at all surgery is to be done, it should be considered through laparoscopic approach, provided all contra indications for this procedure have been ruled out[15]. Two large studies[16,17] found no increase in the risk of congenital malformations and stillbirths among women operated upon during pregnancy, however a few studies reported an increased risk of spontaneous miscarriage among women subjected to general anaesthesia and gynecological surgery in first and second trimester of pregnancy.

In all studies the incidence of prematurity and intrauterine growth retardation were reported to be higher in the surgical group. In our study conservative management led to a good outcome except for one preterm delivery. This observation seems to be well in correspondence with that of Zanottik, who is an advocate of conservative management in properly selected pregnant patients with an ovarian tumour. In on study, surgical management led to three preterm deliveries and five abortions. In all of preterm deliveries and abortions, preceding surgery was done either for torsion of an ovarian cyst or for suspected malignancy. Therefore emergency surgery for acute gynecological indications especially in first trimester of pregnancy is an independent risk factor for occurrence of spontaneous miscarriage. In first trimester of pregnancy, survival is dependent upon an intact corpus luteum, removal of which may end this pregnancy in spontaneous abortion[18]. Therefore Whitecar and colleagues suggested that elective surgery for ovarian tumours during

pregnancy should not be attempted in first trimester,especially before seven weeks of pregnancy[19].

Conservative management of ovarian tumours during pregnancy is still controversial. The concerns regarding this approach resulted from the fear of malignancy that occurred with an average estimated incidence of 3-5%[20]. At the same time an expectantly managed ovarian tumour during pregnancy may undergo torsion or rupture, resulting in adverse obstetric outcome. Another hazard being the risk of abdominal delivery for an impacted ovarian tumour that hindered descent of fetal head in labour[21,22]. The routine policy of pursuing expectant management, for only those who have cyst size of less than 8 cm, is the most probable explanation for non-occurrence of complications like obstructed labour. On the balance, each of the conservative and surgical management has its advantages and disadvantages. Therefore, once the diagnosis is made, its further evaluation and management will always depend upon gestational age, mode of presentation, ultrasonographic characteristics of ovarian mass, parity and wishes of patient about her future fertility.

CONCLUSION

The conventional method of laparotomy for any ovarian mass that persists beyond sixteen weeks of gestation, is a reasonable approach while dealing with pregnancies complicated with ovarian tumour. Conservative management can be offered provided the ovarian mass is neither symptomatic nor suspected of malignancy when examined by an expert ultrasonologist.

REFERENCES

1. Adnan R, Morris MR. Malignant disease in pregnancy. In: James DK, steer PJ, Weiner CP, Gonik B, eds, High Risk Pregnancy Management options 2nd ed. London: WB Sauders, 1999:94.
2. Cunninghum FG, MacDonald PC, Leveno KJ, Gasnt NF, Gilstrap LC, Williams Obstetrics 20th ed, United States of America: Prentice Hall, 1999: 1267-80.
3. Bloom M, Hendel D. Ovarian tumours in pregnancy. Harefuaha 1975; 88: 63.
4. Tsankova M, Marinov B. Pregnancy complicated by ovarian cyst, Akush Ginecol 2001; 40:38-40.
5. Bromely B, Benacerraf B. Adnexal masses during pregnancy: accuracy of sonographic diagnosis and outcome. J. Ultra Med 1997; 16:447-52.
6. Graber E. Ovarian tumours in Pregnancy. In Barber H, Graber E (ed). Surgical Diseases in pregnancy. 2nd ed. Philadelphia: WB Saunders, 1974: 428.
7. Tawak. Ovarian tumours in pregnancy Am J Obstet Gynecol 1964; 90 : 511.
8. Grimes W, Bartholomew R, Colvin I. Ovarian masses complicating pregnancy Am J Obstet Gynecol. 1954 ; 68 : 594.
9. Millenl EW. Ovarian cancer associated with pregnancy Clin Obstet Gynecol 1963; 6: 983.
10. Sayed Lar RM, AL-Sibahi MH, Rahman J, Al-Suleman SA, El Yahia AR; AL-Mullino AA, et al. Ovarian carcinoma associated with pregnancy: a review of nine cases. Acta Gynecol 2002; 81 : 260 - 64.
11. Bhatti NR, Ahmad NS, Akhtar N, Ovarian tumours with pregnancy: 8 years experience. Pak J Obstet Gynecol 1995; 8: 20-22.
12. Pitynshik K, Basia A, Szczudrawa AM Opawshin M. Ginckol Pol 2002: 73;371:75.
13. Chung A, Brinbaum SJ. Ovarian Cancer associated with pregnancy. Obstet Gynecol 1973.
14. Hess L W, Peaceman A, O' Brein WF, Winnel CA, Cruikshank DP, Morrison JC. Adnexal mass occurring with intra uterine pregnancy: report of fifty four patients receiving laparotomy for definitive management Am. J Obstet Gynecol 1989; 158:1029.
15. Caspi B, Levi R, Appleman Z, Rabinerson D, Gold man G, Hgay Z, Conservative management of ovarian cystic teratoma during Pregnancy and labour .Am J Obstet Gynecol 2000 ; 182: 503-05.
16. Duuncon P, Pope W, Cohen M, Green N. Fetal risk of anesthesia and surgery during pregnancy. Anesthesiology 1986: 64: 790-94.
17. Mazze R, Kallen B. Reproductive outcome after anesthesia and operations during pregnancy: a registry study of 5405 cases. Am Jobset Gynaecol 1989, 61: 1178-85.
18. Edward C, Grendys, JR, Willard A, Barnes MD. Ovarian cancer in pregnancy. Surg Clin North Am 1995; 75: 1-5.
19. Whitecar MP, Turner S, Higby MK, Adnexal mass in pregnancy: a review of 130 cases undergoing surgical management. Am J Obstet Gynecol 1999, 18 : 19-24.
20. Ash Kenzy M, Kessler I, Czernmobilshy B. Ovarian tumours in pregnancy. Int J Obstet Gynecol 1988; 27: 79.
21. Oppen V, Holm JP, Trimbos JB, Kazzas B.A. Conservative management of an ovarian cyst in late pregnancy. Int J. Gynecol Obstet 1990; 31: 371-75.
22. Caspi B, Ben-Arie A, Appleman Z, Hagay Z. Aspiration of simple pelvic cysts during pregnancy, Gynecol Obstet Inves. 2000; 49: 102-05

PRESENTATION, MANAGEMENT AND OUTCOME OF MASTALGIA

ASMA MUHAMMAD HANIF, SHAHID RASOOL, MUHAMMAD TARIQ ABDULLAH,

ASADULLAH KHAN

ABSTRACT

Objective *To find out the causes of mastalgia in females of various age groups, its management and outcome.*

Design *Descriptive study.*

Place and Duration

The study was carried out in the breast clinic of Surgical Unit-I, Ward-3 of Jinnah Postgraduate Medical Centre, Karachi. From January 2001 to December 2001.

Patients and Methods

The study included 100 consecutive patients diagnosed as a case of mastalgia on the basis of history and clinical examination.

Results: *Out of 100 patients, 56 presented with cyclical mastalgia, 28 non-cyclical mastalgia, 13 associated with fibroadenoma and 3 had carcinoma.*

Conclusion: *Cyclical mastalgia is commonest in pre-menopausal women whereas non-cyclical mastalgia is common in post-menopausal women. Reassurance and good analgesia can cure more than 50% of patients presenting with mastalgia. Almost all patients of cyclical mastalgia were cured by evening primrose oil. Some of the cases may have other associated lesions which must be excluded carefully.*

KEY WORDS:- *Mastalgia, Breast, Cyclical, Evening primrose oil.*

INTRODUCTION

Benign lesions of the breast are common, however, they have always been neglected in comparison to cancer although they account for as much as 90% of the clinical problems related to breast.[1] Most women experience some form of breast pain during their life time[2]. Breast pain is a common cause of anxiety among women and frequently leads to consultation at primary care clinic. Mild, premenstrual breast discomfort lasting for 1 to 4 days can be considered "normal". However, moderate-to-severe breast pain lasting over 5 days can interfere with usual activities[3]

Correspondence:
Dr Asma Hanif,
House No 882/27-B-6, Street No. 7
Azizabad, Rawalpindi cantt.

The breast pain is generally classified as either cyclical (associated with menstrual periods) or non-cyclical. Non-cyclical pain may come from breast or may be referred from elsewhere such as nearby muscles or joints and may be felt in the breast. Pain can range from minor discomfort to severe incapacitation in some cases. Many women with mastalgia worry more about the consequences of cancer than about the pain itself.[4]

Careful evaluation to rule out breast cancer and reassurance to the patients are enough to make the pain resolve in most of the cases. In a few patients, however,

mastalgia is severe enough to deserve further evaluation and treatment.3 We carried out a study in the breast clinic to find out the causes of mastalgia in females of various age groups, its management and outcome.

PATIENTS AND METHODS

This descriptive study was conducted in Breast Clinic Ward-3, Surgical Unit-I of Jinnah Postgraduate Medical Centre Karachi. It included 100 patients who were diagnosed as a case of mastalgia on the basis of history and clinical examination. Mastalgia was defined as 'breast pain of sufficient severity for a woman to seek medical advice.

This study included female patients of 14 years to 70 years, irrespective of parity, marital, lactational and menstrual status. Patients presenting with discrete lump, nipple discharge or breast abscess were excluded from the study. Complete history and physical examination was carried out. Investigations included blood complete picture, ultrasound breast and mammography in patients older than 40 years. All the patients of mastalgia after ruling out other pathologies like carcinoma, were given a pain chart to record the relationship of pain with menstrual cycle. Patients of noncyclical mastalgia were reassured and given simple analgesics where as those with cyclical mastalgia were prescribed evening primrose oil. Response to treatment was assessed on the same pain chart provided to the patient. These patients were followed for six months. Those who relapsed were advised another three month treatment of evening primrose oil. Non responders were given injection of local anesthetic (lignocaine 1%) at trigger point. Parameters noted were age, menstrual status, severity and pattern of mastalgia, response to treatment and outcome.

RESULTS

This observational study involved 100 female patients. The age range of patients was 15 – 65 years with the mean of 31 and median of 30 years. Seventy seven cases were married and 23 unmarried. Eighty nine (89%) patients were pre-menopausal and 11 (11%) were post-menopausal. Thirty five (35%) of patients presented with left breast pain, while 25 (25%) patients with pain in right breast and 40 (40%) with pain in both breasts. Fifty-six (56%) patients presented with cyclical mastalgia, twenty eight (28%) with non-cyclical mastalgia and 13 (13%) with cyclical mastalgia plus fibroadenoma in breast about which they were unaware and detected by ultrasound. Three post-menopausal patients (3%) presented with occult carcinoma breast.

Cyclical mastalgia (n=56) were managed initially with analgesics and reassurance. Seventeen cases had improvement in their symptoms. Those who did not improved (n=39) were given evening primrose oil, 500 milligram twice daily for three months and all patients responded. They were followed up for another three months. Relapse occurred in 13 patients and they were prescribed evening primrose oil for another three months. None of them needed further treatment. Cyclical mastalgia with fibroadenoma (n=13) underwent excision and managed with reassurance and analgesics.

Non-cyclical mastalgia (n=28) were treated with reassurance and analgesics. Symptoms improved in 25 patients while three patients who did not improve were treated with local anesthetic at the trigger point. Three patients had carcinoma breast also, were staged and managed accordingly.

DISCUSSION

Mastalgia, defined as breast pain, is a common, often distressing complaint among women. It is the most common breast related complaint in primary care clinics, with a prevalence in working women of approximately 60%.[5] An underlying fear of breast cancer is what prompts these patients to seek health care. This study was therefore, done to observe the causes of mastalgia, their relative frequencies, management and outcome.

A comprehensive history and thorough clinical breast examination are essential for evaluation. Once significant breast disease is ruled out, the majority of these patients respond to simple reassurance and analgesia[4] and that was also observed in our study.

On the basis of etiology, clinical presentation and management, two clinical distinct entities of mastalgia have been observed and reported throughout the literature; cyclical and non-cyclical mastalgia. This is also reflected in this study, in which patients with both cyclical and non-cyclical mastalgia were seen. It was observed that the majority of our patients were premenopausal (89%) and presented with cyclical mastalgia (69%). This is similar to what is reported (61%) by Shaukat A.[6] Most of the patients were quite young and in their reproductive age group (mean age 31 years).

Noncyclic mastalgia may be constant or intermittent but is not associated with the menstrual cycle and often occurs after menopause. Extra mammary pain arises from the chest wall or other sources and is interpreted as having a cause within the breast[7]. We had 28 patients with non cyclic mastalgia with mean age 43 years. Siddiqui K observed non cyclical mastalgia in 24%[8] while Shaukat A in 38%.[6]

We had 3 patients with non-cyclical mastalgia who were diagnosed as carcinoma breast, although breast pain

alone is a rare symptom of breast cancer and less than 0.5% of patients with breast cancer have pain as the presenting symptom.[9] According to literature, explanation and reassurance to women with mastalgia after ruling out carcinoma should be the first line of treatment[10] which is verified by our study where 55% were managed with reassurance and analgesia. Drug prescription is indicated only in patients refractory to this form of management.[5]

Patients with cyclical mastalgia should be treated initially with evening primrose oil, after reassurance and analgesics, followed by danazol for patients refractory to treatment. Evening primrose oil is a natural product rather than a drug and is perceived as such and is thus more acceptable to the general public. It is rich in poly-unsaturated omega-6 essential fatty acids. It is thought to restore the abnormal essential fatty acid profile in the breast. Oil of evening primrose is considered useful for patients who require long-term therapy and is usually prescribed as a capsule in a dose of 500mg twice daily.[11] Bromocriptine is a third choice with similar activity to that of evening primrose oil but with a significant incidence of side effects. The response rate tends to be lower for second and third line of treatment.[12]

In this study out of 100 patients, 55 were managed successfully with reassurance and analgesics; this is in accordance with the literature and recommendations. In 39 patients evening primrose oil was given for a period of 3 months. The success rate of evening primrose oil was almost 100% and none of our patients needed 2nd and 3rd line of management. This is similar to the observations of Shaukat A6. Response to treatment is however relatively short lived, usually of the order of 6 months. It is therefore our policy to treat for 3 months and then to see whether relapse occurs on cessation of therapy. Any relapse is an indication for restarting treatment, perhaps at a lower dose than originally used or for a change of therapy if the initial response has been poor.

In non-cyclical mastalgia only 3 patients received local anesthetic at the trigger spot, the rest responded well with reassurance and analgesics. Khan HN has shown success rate of 100% with injection of local anesthetics with steroid in the management of non cyclical mastalgia.[13]

Surgery for mastalgia should only be considered in a minority of patients. Patients should be informed of possible complications inherent of reconstructive surgery and warned that in 50% cases their pain will not improve[14]. Newer treatments include lisuride maleate and topical non-steroidal anti-inflammatory preparations.[15,16]

REFERENCES

1. Ortiz MB, Hernandez BD, Mateos RC, Garcia RFJ. Benign breast disease: clinical, radiological and pathological correlation. Ginecol Obstet Mex 2002; 70: 613-8.
2. Marks Cohen, Rebecca L Aft, Timoth J. Ebertein. Breast surgery 3rd ed. Washington Man Surg: 538.
3. Millet AV, Dirbas FM. Clinical management of breast pain: a review Obstet Gynaecol Surv 2002; 57: 451-61.
4. Shtml.http:/www.strincenthospital.Org/content/adult/breast/pain.
5. Motaman H T, Ader DN, Broune NW, Shiver GD. Clinical evaluation of mastalgia. Arch Surg 1998; 133: 21 – 214.
6. Shaukat A, Zafar F, Haq A, Khan SA. Role of evening Primrose Oil in the treatment of Mastalgia. Pakistan Postgrad Med J 2001; 12:122-5.
7. Smith RL, Pruthi S, Fitzpatrick LA. Evaluation and management of breast pain. Mayo Clin Proc. 2004; 79:353-72.
8. Siddiqui K, Rasool M I. Pattern of breast diseases: Preliminary report of breast Clinic. J Coll Physicians Surg Pak 2001; 11:497-0.
9. Khan SA, Karian AV. Mastalgia and breast cancer: a protective association? Cancer Detect Prev 2002; 26: 192-6.
10. Padden DL. Mastalgia: Evaluation and management. Nurse Pract Forum 2000; 11: 213-8.
11. Qureshi S, Sultan N. Topical nonsteroidal anti-inflammatory drugs versus oil of evening primrose in the treatment of mastalgia. Surgeon. 2005; 3:7-10.
12. Barros AC, Mottola J, Ruiz CA, Borges MN, Pinotti JA. Reassurance in the treatment of mastalgia. Breast J 1999; 5: 162 – 165.
13. Khan HN, Rampaul R, Blamey RW. Local anaesthetic and steroid combined injection therapy in the management of non-cyclical mastalgia. Breast. 2004; 13:129-32.
14. Davies EL, Cochrane RA, Stansfield K, Sweetland HM, Mansel RE. Is there a role for surgery in the treatment of mastalgia? Breast.1999; 8: 285-8.
15. Colak T, Ipek T, Kanik A, Ogetman Z, Aydin S. Efficacy of topical nonsteroidal antiinflammatory drugs in mastalgia treatment. J Am Coll Surg. 2003; 196:525-30.
16. Gumm R, Cunnick GH, Mokbel K. Evidence for the management of mastalgia. Curr Med Res Opin. 2004; 20:681-4.

NEONATAL SEPSIS IN NICU: BACTERIAL ISOLATES AND THEIR SENSITIVITY PATTERN

REHANA AKHTAR, *ASLAM HAIDER, *M. RAFIE RAZA.

ABSTRACT

Objective *To assess the prevailing pathogens and their sensitivity pattern to antibiotics in our Neonatal Intensive Care Unit (NICU).*

Patients and Methods

This was a descriptive study carried out from 1st July 2004 to 30th June 2005, at National Institute of Child Health, Karachi. All the neonates admitted into NICU with strong suspicion of neonatal sepsis were included in the study.

Results

A total of 687 cases with suspected sepsis were admitted and blood was sent for culture and sensitivity. Out of 687 cases, 319 (46.43%) were positive on blood culture. Frequent offenders were gram negative organisms 295 (92.48%). Out of 295 gram -ve blood culture, Enterobacter was the most common pathogen (52.88%, n=156), followed by Klebsiella (22.37%, n=66), Pseudomonas (21.0%, n=62), E.coli (2.0%, n=6), Citrobacater (1.35%, n=4) and Serratia. (0.33%, n=1). Among grams +ve organisms (7.52% n=24) Staph aureus was the main causative organism (n=17) followed by Streptococcus pneumoniae (n=4) and streptococcus spp (n=3).

Conclusion: *Multi-drug resistant gram -ve organisms are emerging as significant pathogens among cases of neonatal sepsis in our NICU.*

KEY WORDS:- *Neonatal sepsis, Culture and sensitivity, Bacterial isolates.*

INTRODUCTION

Neonatal sepsis is a clinical syndrome characterized by symptoms and signs caused by micro organism and their toxic products in the circulation during the first month of life[1]. A significant mortality occurs during the neonatal period due to sepsis. Neonatal infections are estimated to cause 1.6 million (40%) of all neonatal deaths occurring in developing countries[2]. There is variation among causative micro organisms with geographical area and time. These pathogens may vary at different times within the same place as well.[3]

Advances in antimicrobial therapy have not been proven successful in decreasing the mortality and morbidity among neonates all over the world. Neonates have weak immune system which make them vulnerable to infection. There are other risk factors involved in neonates as well as in the mothers.[4] Grams negative organisms still remain the major cause of neonatal sepsis in most of the developing countries[5]. A review has shown that out of positive blood cultures, 60% gram negative bacilli were isolated in developing countries[6].

Correspondence:
Dr. Rehana Akhtar,
Department of Clinical Pathology
National Institute of Child Health
Karachi.
* Department of Paediatric Medicine.

In Pakistan research has shown that babies born at large public sector hospitals develop colonization by gram negative organisms within 72 hours of birth[7]. Multiple drug resistance is another issue which has reached to alarming levels in nurseries in developing countries. Many authors have shown that absence of standard infection control practices is causing hospital acquired neonatal infections in developing countries[8].

The objective of this study was to assess the prevailing pathogens and their sensitivity to antibiotics in Neonatal Intensive Care Unit of National Institute of Child Health (NICH), Karachi.

PATIENTS & METHODS

It was a descriptive study conducted over a period of 12 months from 1st July 2004 to 30th June 2005. For the purpose of study, diagnosis of sepsis was made on clinical grounds and if blood culture proved positive for bacterial growth. All neonates admitted to NICU with symptoms and signs of sepsis were selected. A detailed history and examination were done. Blood was drawn for culture. Complete blood count and radiological investigations were carried out as required. Blood cultures were done at N.I.C.H. Laboratory. For blood culture 2-4 ml of blood was collected in blood culture bottle containing tryptic soya broth. Blood culture bottles were incubated at 37 C for 7 days and were examined for bacterial growth. Subcultures were taken at 1, 3, 5 and 7 day of incubation on blood agar and Mac Conkey's and Chocolate agar. The isolates were identified by standard biochemical tests. Antibiotic resistance pattern of isolates was studied by modified Kirby Bauer disc diffusion technique method.

RESULTS

A total of 687 blood cultures were obtained and sent to microbiology laboratory. Positive blood culture were 319, with the culture positivity rate of 46.43%. Out of 319 positive cultures, gram negative were predominant (92.48%). Enterobacter was major pathogen (52.88%) isolated. Enterobacters were highly resistant to the routinely used antibiotics (table I). However Enterobacter showed high sensitivity to imipenum (92.90%). The second most common organism among gram negative was Klebsiella Spp followed by Pseudomonas aeuroginosa and E. coli. Majority of organisms were highly resistant to amoxycillin, co-amoxiclav, ceftazidime, cefotaxime and ceftriaxone. They were highly sensitive to imipenum.

Gram positive organisms constituted about 7.52% of all positive cultures. Staph aureus was the main offender followed by Streptococcus pneuomoniae and Streptococcus Species. Resistance of Staph aureus to amoxycillin was 52.92%, co-amoxiclav 29.41%, ceftazidime 100%, cefixime 77.77%, cefotaxime 52.94%, ceftriaxone 53.33%. Sensitivity to imipenum was 92.30% (Table II).

DISCUSSION

In spite of advances in antimicrobial therapy, neonatal sepsis remains serious problem for neonates[4]. Some reports from Pakistan and abroad show the incidence of neonatal sepsis between 36% to 55%[9]. In our study the culture proven cases were 46.43%. Other studies have also observed similar culture positive rates[10]. Among gram-negative organisms Enterobacter Spp was the most

TABLE-I **CULTURE AND SENSITIVITY PATTERN OF GRAM NEGATIVE ORGANISMS N=295 (92.48%)**

Antibiotic	Enterobacter n=156 (52.88%)		Klebsiella spp. n=66 (22.37%)		Pseudomonas aeuroginosa n=62 (21.0%)		E. coli n=6 (2.0%)		Citrobacter n=4 (1.35%)		Serratia n=1 (0.33%)		
	R %	S %	R %	S %	R %	R %	S %	S %	R %	S %	R	S %	S
Amoxycillin	94.9	5.1	98.3	1.7	96.5	100	0	3.5	83.3	16.7	R	-	0%
Co-Amoxiclav	76.92%	23.08	50	50	89.65	66.6	33.4%	10.35%	66.6%	33.4%	R	-	33.4%
Ceftazidime	89.74%	16.6	98.	2	72.72	100	0	27.28%	60	40	-	S	0%
Cefixime	83.97%	16.03	100	0	96.26	100	0	3.74%	83.3%	16.7%	R	S	0%
Cefotaxime	91.66%	4.34	98	2	68.42	100	0	31.58%	100%	0	-	S	0%
Ceftriaxone	90.38%	9.62	97.9	2.1	85	100	0	15	66.	34	-	S	0%
Imipenum	7.10%	92.90%	1	99	18.9	25	75	81.1%	0	100%	-	S	75%

TABLE-II SENSITIVITY PATTERN OF GRAM POSITIVE ORAGANISMS N=24 (7.52%)

Antibiotic	Staph aureus n=17		Strep. pneumoniae n=4		Streptococcus Spp n=3	
	R	S	R	S	R	S
Amoxycillin	52.92%	47.78%	50%	50%	33.3%	66.7%
Co-Amoxiclav	29.41%	70.59%	50%	50%	33.3%	66.7%
Ceftazidime	100%	0%	50%	50%	36.6%	63.4%
Cefixime	77.77%	22.23%	50%	50%	36.6%	63.4%
Cefotaxime	52.94%	47.06%	33%	67%	50%	50%
Ceftriaxone	53.33%	46.67%	66.6%	33.4%	50%	50%
Imipenum	7.70%	92.30%	50%	50%	50%	50%

frequent isolates (52.88%) which is in consistence with the results of a study where they found Enterobacter as the most common isolate in the period between 1992-1998.[11] They also experienced an outbreak of Enterobacter in 1997. Bhutta et al also experienced that Enterobater was a growing problem in neonatal sepsis[12]. A ten years surveillance study found Enterobacter as a major pathogen (76%). Data based study showed the same results[13]. Our study have observed high resistance against common antimicrobials. Only impenum showed high sensitivity (92. 90%). This observation is in accordance with other studies[14]. During the last decade, there have been many reports of outbreak caused by Enterobacter in neonates specially by multi drug resistant strains[15]. Enterobacter bacteremia are observed mostly in neonates and elderly individuals reflecting the increased prevalence of severe underlying diseases at these age extremes .The choice of appropriate antibiotic is complicated by the fact that the majority of bacteria in this genus are either resistant to these agents or can develop resistance during antimicrobial therapy. The fourth generation are relatively stable to the action of beta lactamases carbapenems are the only reliable drug for the treatment of severe Enterobacter infection. Enterobacter is ubiquitous organism and the infection may be acquired even in outside hospital environment[12].

The second common pathogen observed in our study was Klebsiella Spp. (22.37%). Several studies have observed this organism as most common pathogen[16]. Our study is in accordance with other studies where they found Klebsiella Spp as second common isolates.[17] Klebsiella Spp. in present study showed high resistance against commonly used antibiotics. These isolates showed high sensitivity against imipenum (99%). The third common isolates in this study was Pseudomonas aeruginosa (21%).Pseudomonas aeuroginosa has been found to be third common isolate[13] but first common isolate by other authors18. In this study Pseudomonas aeuroginosa have shown high resistance to penicillin and third generation cephlosporins. It showed less sensitivity to imipenum (84.44%) unlike other gram negative organisms where the sensitivity was 92-100%.

E-coli was the fourth common isolate among gram negative organisms in our study. It showed high resistance towards penicillin and third generation cephalosporins but showed 100% sensitivity to imipenum. E-coli found to be commonest in some studies[19] and showed high resistance to the above drugs especially cefotaxime, where 100% resistance[15] is reported. Only imipenum was found to be 100% sensitive. Citrobacter showed the same pattern.

Among the gram positive pathogens, staph aureus was the major bacterial agent of neonatal sepsis. This organism also showed a very high resistance towards antibiotics. This organism also showed high sensitivity to imipenum. Many studies from Pakistan and abroad have observed this organism as most common pathogen.[17] Staph aureus has been responsible for outbreak as reported by numerous studies. The main source of infection was hands of health care providers. Second common gram positive organism was Streptococcus pneumonae. The resistance to penicillin and cephalosporin were comparatively low than Staph aureus and gram negative organisms but sensitivity to imipenum was almost half as compared to grams negative and straph aureus.

In the light of our results we conclude that antibiotic resistance in neonatal sepsis is emerging as the most serious problem. In developing countries, the emphasis is mainly on treatment by antibiotic than preventable measures. In 1997, there was an outbreak of Enterobacter disease. After cleaning, improved nursing care and hygiene reinforcement, Enterobacter was not isolated in next 2 years. Many studies in the past have suggested effective strategies to prevent nosocomial neonatal sepsis, which include monitoring and surveillance of infection rates, distribution of pathogen, nursery design and staffing, staff accountability for incidence of nosocomial infection, programme to check hand washing compliance, cautious insertion and handling of central venous catheters, minimizing central venous catheter duration and prudent use of microbial anti agents. Educational programmes for infection control and feedback to NICU personnel improve compliance. These guidelines if implemented can help to reduce the risk of nosocomial sepsis and improve outcome.

REFERENCES

1 Hameed N, Maqbool S. Haematological screening in diagnosis of neonatal sepsis. Pak Pediatr J 1998;22:47-52.

2 WHO Mother-baby package: a road map for implementation in countries. Geneva: World Health Organization, 1993.

3 Koutouby A, Habibullah J. Neonatal sepsis in Dubai. United Arab Emirates. J Trop Pediatr 1995;41: 177-80

4 Guerina NG. In: Manual of Neonatal Care, 4th ed. (Eds.) Cloherty JP, Stark AR. Lippincott-Raven, Philadelphia 1998; 271-299.

5 Orrett FA, Sherland SM. Neonatal sepsis and mortality in a regional hospital in Trinidad; aetiology and risk factors. Ann Trop Paediat, 2001; 21:20-25

6 Fikree FF, Marsh DR, Ali N, Bhutta ZA. State of the world's newborns: Pakistan. A report from saving newborn lives. Islamabad : Save the Children Federation, 2001

7 Adlerberth I, Carlsson B, Deman P. Intestinal colonization with Enterobacteriaceae in Pakistan and Swedish hospital- delivered infants. Acta Paediatr Scand 1991; 80:602-10.

8 Clark R, Powers R, White R, Bloom B, Sanchez P, Benjamin DK. Preventaion and Treatment of Nosocomial Sepsis in the NICU. J Perinat 2004; 24: 446-53.

9 Das PK, Basu K, Charkraborty P, Bhowmik PK. Clinical and bacteriological profile of neonatal infections in metropolitan city based medical college nursery. J Ind Med Assoc 1999;97:3-5.

10 Roy I, Jain A, Kumar M, Agarwal SK Bacteriology of neonatal septicaemia in a tertiary care hospital of northern India. Indian J Med Microbiol 2002; 20:156-9

11 Hervas JA, Ballesteros F, Alomar A, Gil J, Benedi, Alberti S. Increase of Enterobacter in neonatal sepsis: a twenty-two year study. Pediatr Infect Dis J 2001;20:134-40.

12 Bhutta.ZA. Enterobacter sepsis in the newborn-a growing prolem in Karachi. J Hosp Inf 1996; 34, 211-216

13 Malik MA, Hussain W, Izhar M, Asim M, Aslam M. Ten years surveillance of bacterial isolates from blood culture of neonates. Pakistan Pediatr J. 2002; 26: 113-18.

14 Abbasi SA, Karamat KA, Hafeez A, Luqman M. An outbreak of neonatal sepsis in a nursery. Pakistan Pediatr J 1997; 21; 149-153.

15 Waheed M, Laeeq A, Maqbool S. The etiology of neonatal sepsis and patterns of antibiotic resistance. J Coll Physicians Surge Pakistan 2003; 13: 449-52.

16 Al-Harthi AA, Dagriri KA, Asindi AA, Bello CS. Neonatal meningits. Saudi Med J 2000 :550-3.

17 Al-Zwaini EJ. Neonatal septicaemia in the neonatal care unit, Al-Anbar governorate Iraq. East Mediterr Health J 2002; 8: 509-14.

18 Aliaga L, Mediavilla JD, Cobo F. A Clinical index predicting mortality with Pseudomonas aeruginosa bacteraemia. J Med Microbiol 2002; 51: 615-9.

19 Karki BM, Parija SC. Analysis of blood culture isolates from hospitalized neonates in Nepal Southeast Asia. J Trop Med Public Health 1999; 30:546-8.

RISK FACTORS FOR TUBAL ECTOPIC PREGNANCY

RUMINA TABASSUM, MUHAMMAD AMMAD SAEED, MARIAM AHMED, SAJEELA NAUREEN, NUSRAT H KHAN

ABSTRACT

Objective *To determine the risk factors for tubal ectopic pregnancy.*

Design: *A case control study.*

Place and Duration of Study:
This study was conducted at the Gynaecology and Obstetrics Unit III, Civil Hospital Karachi from 1t January, 2003 to 31st May, 2005.

Patients and Methods:
All the patients diagnosed as a case of ectopic pregnancy during the twenty nine months period were included in our study. While the control group constituted pregnant women selected at random from the antenatal clinics and through person to person communication. All the relevant data was recorded on a questionnaire and the final results were analyzed.

Results: *The incidence of ectopic pregnancy was found to be 1:90, when compared with normal deliveries. Age group of 25-≤35 yr in 44% and parity between1-3 in the 50% of the cases was noted. On analysis strong and independent risk factors for the ectopic pregnancy were post partum infections (OR-11.42, p-0.001), confirmed pelvic inflammatory disease (OR-11.11, p-0.001), surgical evacuation (OR-6.78, p-0.009), tuberculosis (OR-4.17, p-0.041) and previous tubal pregnancy (OR-4.17, p-0.041).*

Conclusion: *The problem of pelvic infection, surgical evacuation and previous tubal pregnancy were the main factors of ectopic pregnancy in our study*

KEY WORDS:- *Pregnancy, Ectopic, Tubal, Risk Factors*

INTRODUCTION

The incidence of ectopic pregnancy is increasing[1] throughout the world especially during the 1970's and early 1980's when it doubled or tripled in even the most industrialized countries, reaching to an annual incidence rate of between 100 and 175 per 100 000 women aged 15-44.[2,3] The reported incidence of this disease varies from 0.67 in developed countries[4] to 1:130 in Pakistan[5]. In the developed world, though there is an increase in the incidence of this condition, the mortality from it has been on the decline.[1] This is not so for the developing countries, where it is an important cause of maternal death. It should be noted that the ectopic pregnancy has a risk of death ten times greater than that of a normal child birth and fifty times greater than that of a legal abortion[6]

The reported etiological factors for the ectopic pregnancy

Correspondence:
Dr. Rumina Tabassum
Gynaecology and Obstetrics Unit III,
Dow Medical College & Civil Hospital,
Karachi.

include pelvic inflammatory disease (PID), post abortal sepsis, postpartum sepsis, previous ectopic pregnancy, reversal of previous tubal ligation, previous cesarean section, tubal spasm, congenital defects of the fallopian tube, psychological and emotional factors.[7] The purpose of this study was to determine the risk factors for ectopic pregnancy in Pakistani women and to suggest prophylactic measures to reduce the risk for ectopic pregnancy.

PATIENTS AND METHODS:

During the past two years and five months period, starting from the 1st January, 2003 till 31st May, 2005, all the cases of tubal ectopic pregnancy, fifty in all, reported to the Gynecological and Obstetrical Unit III , Civil Hospital Karachi, were included in this study. Their case records were carefully maintained and analysis of the associated risk factors was done using a standard questionnaire. The cases were compared with a control group of equal number of pregnant women who were selected at random from the antenatal clinics and through person to person communication.

The women in the control group were interviewed by trained research interviewers and the details were recorded in the same standard questionnaire. The information regarding age, gravida, time since last birth, number of sexual partners, type and duration of contraceptive method used, obstetrical history, history of pelvic inflammatory disease, endometriosis, previous ectopic pregnancy, tuberculosis, appendicitis, abdomino-pelvic surgery and smoking was recorded. Significant risk factors were analyzed using an Odds ratio and p values.

RESULTS

Total number of deliveries during the 29 months period was 4507. Total number of ectopic pregnancy reported during the 29 months period was 50. The incidence of tubal ectopic pregnancy was: 1:90. In our study the maximum numbers of cases were reported from the 25-30 years age group, (44% in all), and the gravida 1-3 were found to have more ectopic pregnancies, up to 50% of all the cases. Table I shows number and percentage of risk factors among both cases and control groups. Statistical analysis showed significance to postpartum infection, confirmed PID, surgical evacuation, tuberculosis and previous tubal pregnancy as a risk factor for ectopic pregnancy.

DISCUSSION

The ectopic pregnancy is due to implantation of the fertilized ovum in an abnormal site, commonest being fallopian tube, due to delayed passage of the ovum until it is at the stage for implantation and chooses the nearest site for it. The risk factors by which it occur are many.[10] The importance of infectious factors in ectopic pregnancy is well documented[11] In Sweden, declining rates of chlamydial infection, attributed to preventive policies, have been accompanied by a fall in the risk of ectopic pregnancy[12]. The age at first intercourse and number of sexual partners[13] are the variables suggestive of higher probability of sexually transmitted diseases and are not risk factors per se.[14] Abdominopelvic surgery for example appendicectomy, caesarean section, tubal reconstruction and conservative procedures for previous tubal ectopic pregnancy increase the risk of tubal ectopic pregnancy[15]. Salpangitis isthimica nodosa affects the tubal epithelium[16]. In our study there were 36% cases of probable PID and only 20% of confirmed PID, however confirmed PID was found statistically significant, p=0.001, OR=11.11. Post partum infection was equally significant. Tuberculosis and previous tubal pregnancy had the same p value of 0.041 and OR=4.17.

Tubal pregnancy rate increases steeply after the age of 30 years and especially after 35 years[17]. The relationship between risk of ectopic pregnancy and an advanced maternal age remains unclear. It is unlikely to involve an increase in chromosomal abnormalities in the trophoblastic tissue[18]. Age related changes in tubal function may delay ovum transport and result in tubal implantation. However, this hypothesis remains to be tested[19]. In our study maximum cases i.e. 44% were of less than 30years of age.

Spontaneous abortions may have a causal effect, possibly mediated by infection[1]. However there may also be common risk factors for ectopic pregnancy and spontaneous abortions such as chromosomal abnormalities[20], hormonal factors[21] or immunological factors[14]. The adjusted risk of ectopic pregnancy is particularly high in women with three or more previous spontaneous abortions[14]. The study by Tharaux suggested the connection between surgical induced abortions and ectopic as a consequence of uterine injuries or infection[24]. The association with medical abortion may be accounted for by the absence of systemic biotic anti prophylaxis in this group of women, while such prophylaxis is given in cases of surgical abortion[14]. In our study surgical evacuation irrespective of type of abortion is significant by p=0.009 and OR=6.78. It is likely that a history of infertility per se (independent of infertility drug use) is associated with ectopic pregnancy risk[22], which is also supported in our study. Moreover ectopic pregnancy is known to be a risk factor for subsequent infertility, ovulation induction and I.V.F[23].

Insertion of I.U.C.D. during a month following previous pregnancy, duration of the use of I.U.C.D. and pelvic pain

TABLE-I COMPARISON OF CASES AND CONTROL

Variables	Cases (n = 50)	Control (n = 50)	Odd ratios	p value
Induced abortion	5 (10)	1 (2)	2.84	0.092
Spontaneous abortion	9 (18)	4 (8)	2.21	0.137
Surgical evacuation	14 (28)	4 (8)	6.78	0.009*
Tuberculosis	4 (8)	0 (0)	4.17	0.041*
Post partum infection	18 (36)	4 (8)	11.42	0.001*
Appendectomy	1 (1)	0 (0)	1.01	0.315
Caesarean section	4 (8)	5 (10)	0.122	0.727
Previous tubal pregnancy	4 (8)	0 (0)	4.17	0.041*
#Probable PID	12 (24)	6 (12)	2.44	0.118
€ Coufirmed PID	10 (20)	0 (0)	11.11	0.001*
IUCD	2 (4)	0 (0)	2.04	0.153
Oral contraceptive	3 (6)	4 (8)	0.15	0.695
Progesterone	6 (12)	2 (4)	2.17	0.140
Infertility	3 (6)	0 (0)	3.09	0.079

KEY:
Given values in parentheses are percentages.
* Shows significantly greater proportions of case than control at $p < 0.05$.
# Probable PID, association of fever, abdominal pain, and vaginal discharge.
€ PID confirmed on laparotomy.

resulting in medical consultation after insertion of I.U.C.D increases the risk of ectopic pregnancy[25]. If a woman with I.U.C.D. conceives, she has a higher chance of ectopic gestation. Under these circumstances, the ratio of ectopic to intrauterine pregnancy is increased by seven times compared with the ectopic in the absence of a device[26]. In our study of the IUCD and hormonal contraceptive methods were not found significant.

Ectopic pregnancy occurs as a result of contraceptive failure, if the woman was using contraceptive method or as a result of reproductive failure in other cases[27]. The decrease in the rates of ectopic pregnancy as a contraceptive failure is explained by decrease use of I.U.C.D in older women and subsequent contraception are preferentially prescribed for multiparous women, this leads to an increased proportion of pill contraception in the population of fertile women[27]. The pregnancies occurring in women taking progestrogen-only oral contraceptive are 4-6% ectopic. This may be due to progesterone's smooth muscle relaxation action and the subsequent ovum trapping[28].

A strong association between tobacco use and ectopic pregnancy has been demonstrated by several studies. This probably a causal relation and tobacco use may play a role at various stages in reproduction, ovulation, fertilization, viability, and implantation. Smoking cessation reduces the risk of ectopic pregnancy to a level intermediate between that of current smokers and that of women who have never smoked.[27] There was no women with the history of smoking in case and control group of our study.

REFERENCES

1. Doyle MB, DeCherney AH, Diamond MP. Epidemiology and etiology of Ectopic pregnancy. Obstet Gynecol. Clin North Am. 1991; 81: 1-152.
2. Coster J, Sylviole J B. Ectopic Pregnancy is again on increase. Recent trends in the incidence of ectopic pregnancy in France (1999-2002). Human Reprod, 2004.9: 2014—18.
3. Lehver R , Kucera E , Jirecek S , Egarter C , Husstein P. Ectopic pregnancy. Arch Gynecol Obstet. 2000; 263: 87 -92.
4. Stabile I, Grudzinka JG. Ectopic pregnancy: a review of incidence, etiology and diagnostic aspects. Obstet Gynecol Surv 1990; 45: 335– 47.
5. Khawaja Na. A study of 50 cases of ectopic pregnancy. Pak J Obstet Gynecol 1988;11 61-65
6. Drofman SF. Death from ectopic pregnancy, United states 1979-1980 Obstet Gynecol. 1983; 62:334
7. Anorlu, Ayodegi Oluwole, Abudu OO, Adebajo S, Rose I. Risk Factors for ectopic pregnancy in Lagos, Nigeria. Acta Obstet Gynecol Scand 2005;184-188.
8. Akhtar MS. Ectopic pregnancy: Practical Gynaecology. P: 77-81
9. Maqsood A B, Ectopic pregnancy, Pak J obstet Gynaecol 1991; 4:55-9.
10. Dewhurst's text book of obstetrics and Gynaecology for postgraduates, Whitefield Ed.5th, 1999, Abortion P.W Howic, Abortion Ectopic ,12 : 155 .
11. Westrom L. Influence of quite pelvic inflammatory disease on fertility. Am. J Obstet Gynecol 1975; 121; 707-13.
12. Egger M, Low N, Smith GD, et al. Screening for chlamydial infections and the risk of ectopic pregnancy in a country, in Sweden: ecological analysis. Br Med J. 1998; 316: 1776-80.
13. Parazzivi F, Tozzi L, Ferraroni M. Risk factors for ectopic pregnancy; a comprehension analysis based on a large case control, population based study in France. Am. J Epidemiol. 2003;157: 185-194.
14. Jean B, Joel C, Taraneh SI. Risk factors for ectopic pregnancy; A comprehension analysis based on a large case control, population based study in France. Am. J. Epidemiol. 2003, 157 185-194.
15. Nuzhat M, Farhat I, Rakhshanda T. Analysis of tubal pregnancy. J Coll Physicians Surg Pak 2000;10: 632 - 5.
16. Saracoglu FO , Mungen T , Tanzer T : Salpingitis Isthimica nodosa in infertility and ectopic pregnancy Gynecol Obstet Invest 1992 ; 34: 202-5.

17. Coste J, Spira N, Aublet. Incidence of ectopic pregnancy in France, Hum. Repro. 1994;9: 742-5.
18. Goddijn M, Cytogenic characteristics of ectopic pregnancy. Hum. Reprod., 1996. 11: 2769 - 71.
19. Yako TR, Handler A. The effect of aging on tubal function and ectopic pregnancy. Reprod Endocrinol. 1991; 9: 215- 220.
20. Job Sipara N, Coste J, Bouyer J. Chromosomal abnormalities and ectopic pregnancy? New directions for aetiological research. Human Reprod 1996; 11: 234.
21. Fernandez H. The hidden side of ectopic pregnancy; the hormonal factor. Hum Reprod. 1996; 11: 234.
22. Bunyavejchevin S , Havanond P. Risk factors of ectopic pregnancy. J Med Assoc Thai. 2003; 86: 417-21.
23. Khalid T, Elahi N, clinical presentation of chronic ectopic pregnancy. J Coll Physicians Surg Pak. 2000;10:200-03.
24. Houzard S, Bajos N, Warzawki J. Analysis of the under estimation of induced abortions in a survey of general population in France. Sur J Contracept Reprod. Health Care. 2000; 5: 52-60.
25. Mol BW, Ankum MW, Bossuyt PM, Van der F. Contraception and risk of ectopic pregnancy. Contraception, 1995; 52: 337-41.
26. Vessey M.P, Johnson B. Outcome of pregnancy in woman using an intrauterine device. Lancet 1974; 495-9.
27. Coste J, Jean B, Sylviole. Ectopic Pregnancy is again on the increase. Recent trends in incidence of ectopic pregnancy in France (1992—2002). Hum. Reprod. 2004.9:2014—18.
28. Current obstet & gynaecol, diagnosis and treatment. Alan H, N Lauren. 9th edition. 2003.

FREQUENCY OF CARCINOMA IN SPECIMENS OF CLINICALLY BENIGN ENLARGED PROSTATE

WASEEM YAR KHAN, MIAN IFTIKHAR UL HAQ, ABDUS SAMAD KHAN, MAZHAR KHAN, USMAN ALI.

ABSTRACT

Objective *To determine the frequency of carcinoma prostate on histology, in specimens obtained from patients with clinically benign enlarged prostate.*

Design: *Descriptive study.*

Place and Duration of Study:
This study was carried out in Khyber Teaching Hospital (KTH) Surgical ward D and Lady Reading Hospital (LRH) surgical ward A, Peshawar from January 2004 to December 2004.

Patients and Methods:
A total of 107 patients who presented to Surgical OPD with bladder outflow obstruction and fulfilled the inclusion and exclusion criteria of the study were included in the study. After an informed consent history, clinically examination and related investigations were carried out. All the patients underwent transvesical prostatectomy (TVP) and their prostate specimens were subjected to histopathology.

Results: *Total number of patients was 107. Most of the patients (58.88%) with benign prostatic hypertrophy (BPH) were in age range of 56 – 60 years. The common presenting complaints were prostatism (57.94%) and acute retention (34.58%). All patients underwent trans vesical prostatectomy (TVP). On histopathology 3.74% turned out as adenocarinoma prostate while 96.26% biopsies showed BPH. The mean age of presentation with carcinoma (Ca) prostate was 65 years.*

Conclusion: *In this study the frequency of Ca prostate in specimens of clinically benign enlarged gland was 3.74%. Therefore, all specimens must be submitted for histopathology after prostatectomy.*

KEY WORDS:- *Prostate cancer, Benign prostatic hyperplasia, Prostate specimens.*

INTRODUCTION

Frequent pathologies associated with prostate are prostatitis, BPH and prostatic carcinoma[1]. One potential but unwarranted concern for the patients with prostatic hyperplasia is the possibility of prostatic cancer. Benign prostatic hyperplasia does not appear to cause or predict the presence of prostatic cancer[2]. Carcinoma is the 2nd most leading cause of cancer death after lung cancer in men[3]. In European Union 13% of malignancies diagnosed in men comprise of prostatic cancer and 8.6% of all deaths are due to this disease[4]. The incidence of Ca prostate is highest in Sweden and lowest in Singapore[5]. The 70% of prostate cancer arises in the peripheral zone, 5% in the central zone, while 25% arises in the transitional zone[6].

Correspondence:
Dr Mian Iftikhar ul Haq,
Mian House, E-67 Street No 4,
Nasir Bagh Road Canal Town,
Peshawar.

Prostatic carcinoma should be suspected in patients with short duration of symptoms i.e. lasting from 15 days to one month[2]. The presenting features are urinary retention, prostatism, haematuria, burning micturition, pain hypogastrium, backache and weakness of lower limbs[7]. Approximately 35% patients had bones or lymph nodes metastasis with 40% having extracapsular extension. Extension of tumor beyond the gland decreases survival rate substantially[8].

The PSA assay, digital rectal examination (DRE) and trans rectal ultrasound (TRUS) provide tools for detecting prostate cancer at a very early stage, when it is still confined to the organ and thus curable[9]. The accuracy of DRE in detecting prostatic cancer is 20-40% and of TRUS is 37 – 76%[10]. The diagnosis is confirmed by needle biopsy of suspicious area of prostate or by histological examination of surgically removed prostatic tissue[2]. For incidentally diagnosed malignancies of prostate a regular follow up is required[11]. The life expectancy of a patient with an incidental finding of focal carcinoma of the prostate is that of the normal population[12].

The purpose of this study was to determine the frequency of carcinoma prostate on histology in specimens obtained from patients with clinically BPH.

PATIENTS AND METHODS

This was a descriptive study of 107 patients who underwent prostatectomy from 1st January 2004 in KTH surgical "D" ward and LRH surgical "A" ward Peshawar. The sample technique was non-probable purposive.Prostatism was defined as symptom complex resulting from compression or obstruction of urethra, and graded according to the IPSS chart. The detail of IPSS chart is depicted in table I.

The patients admitted through surgical OPD with symptoms of prostatism, convincingly enlarged but benign looking prostate and post voiding urine volume above 100 ml were included in this study. While patient having stony hard prostate on DRE, bladder growth, urethral stricture and post voiding urine less than 100 ml were excluded from this study. After taking an informed consent, demographic detail, history of presenting complaints according to IPSS chart, general physical examination and systemic examination of patient was taken. Findings of DRE regarding size, surface and consistency of prostate gland were recorded.

Laboratory investigations like complete blood count, urine routine examination, serum creatinine, ultrasound abdomen and pelvis with full urinary bladder and post void scan were also done routinely in all patients. ECG andx–ray chest were done for anesthesia purpose. New

TABLE-I INTERNATIONAL PROSTATE SYMPTOMS SCORING CHART

S. NO	SYMPTOMS	Not at all	Less than 1time In 5	Less than half the time	About half the time	More than half the time	Almost always
1	Over the past month or so, how often have you had a sensation of not emptying your bladder completely after you finish urinating?	0	1	2	3	4	5
2	Over the past month or so, how often have you had to urinate again less than two hours after you finish urinating?	0	1	2	3	4	5
3	Over the past month or so, how often have you found t hat you s topped and started again several times when you urinated?	0	1	2	3	4	5
4	Over the past month or so, how often have you found it difficult to postpone urination?	0	1	2	3	4	5
5	Over the past month or so, how often have you had a weak urinary stream?	0	1	2	3	4	5
6	Over the past month or so, how often have you had to push or strain to begin urination?	0	1	2	3	4	5
7	Over the last month, how many times did you Most typically to get up to urinate from the Time you wen t to bed at night	0 time	1 time	2 times	3 times	4 times	5 times

TOTAL SYMPTOMS SCORE = SUM OF QUESTIONS 1-7 =

Symptoms score	Symptoms severity
1-7	Mild
8-19	Moderate
20-35	Severe

TABLE-II SYMPTOMATOLOGY

SYMPTOMS	PATIENTS NO. (N)	PERCENTAGE (%)
Prostatism	62	57.94
Acute retention	37	34.58
Retention with overflow	5	4.67
Haematuria	2	1.87
Incontinence	1	0.93

methods for detection of carcinoma prostate like estimation of PSA and transrectal ultrasonography were not done due to technical and financial limitations. All patients underwent urethrocystoscopic examination before surgical intervention. TVP was done and all the resected specimens were sent for histological analysis.

The data collecting from the specially designed proforma

for these patients were labeled in SPSS (Scientific Package for Social Science) version[10]. After labeling of data into SPSS 10 version, descriptive statistics like mean, mode, median, standard deviation and percentages were calculated accordingly.

RESULTS

In our study total no of patients were 107. Most of patients were in age range of 50 to 75 years. Majority of patients (58.88%) were between 56 to 60 years. Most of patients (57.94%) presented with symptoms of prostatism (table II). 54.20% patients presented with 50 – 100 grams weight of prostate on ultrasound. On histopathology, 3.74% turned out as adenocarcinoma of prostate while biopsy report of rest (96.26%) of the patients showed benign prostatic hyperplasia. The mean age of Ca prostate in our study was 65 years.

DISCUSSION

Prostate is a common malady in the geriatric age group. BPH and carcinoma of prostate are increasingly frequent with advancing age and uncommon before the age of 40 years. Carcinoma prostate is not uncommon cancer in Pakistan probably due to increased life expectancy in elderly population and better diagnostic method.[13,14] Mean age of presentation with prostatic cancer in our study was 65 years. Rasool M et al; reported similar mean age of presentation i.e. 65 years[2]. Muhammad AZ et al; reported mean age of presentation with CA prostate was 63.7 years[15]. Iqbal SA and Sial K, reported that mean age of presentation with prostate cancer was 69.5 years with majority of patients between the age of 64-81 years[13].

The presenting symptoms mention also conformed to the international literature[2,11,12,16]. Zahid et al reported percentage of symptoms i.e. prostatism (50%), retention of urine (40%), outflow dribbling (5%) and other symptoms 3.5%.[17] Ultrasound confirmed weight of prostate in 54.20% of patient as 50-100 grams. Rasool M reported 50-100 grams of prostate weight in 50% of patients. Richard G R reported same weight of prostate in patients presented with BPH symptoms[18].

In management TVP was done in all patients. All resected specimens were analyzed histopathologically revealing 3.74% incidence of prostatic adenocarcinoma in cases of clinically benign prostatic hyperplasia. Hayakawa et al; reported incidence of 3.2% of prostate cancer in 463 patients underwent TURP,using patient age, PSA level, prostate volume, PSA density and resected prostatic tissue volume as parameters.[19]

Tanakay et al reported incidence of 4.4% carcinoma prostate (stage A) in specimens of prostate in 3294 patients[20]. The 3.74% figure of our study does not correspond to that of Iqbal SA, and Sial K, who reported the incidence of 8% prostate cancer in study conducted on 44 patients but they did not mention any selection criteria and patient presumed to be suffering from BPH were subjected to prostatectomies[13].

Khan RA et al showed incidence of 23%. The difference may be due to small size sample and patients with abnormal DRE and suspicion of malignancy on ultrasound were also included in the study [21]. Kamal F et al reported 15.56% of carcinoma in prostatic biopsies in series of 906 cases. Size of this study was 10 times greater than our study and no exclusion criteria was mentioned which are the reasons for difference of results[22]. Rasool M et al demonstrated 19% incidence of prostatic adenocarcinoma (grade I, II) in cases of clinically benign prostatic hyperplasia which is quite high from our study. This difference may be due to number of cases & IPSS, PSA level and post voiding urine volume was not taken into account[2].

Mai KT et al quoted incidence of 8% in TURP specimen for BPH, taking PSA level into consideration which is the reason for difference of result[23]. It has been reported that 95% carcinoma prostate are adenocarcinoma[24]. This is almost similar with our study in which all these cases that is 100% were reported adenocarcinoma on histopathology. Patients who were pre operatively diagnosed as BPH and later confirmed on histopathology as malignancy were treated conservatively. For incidental carcinoma, which was reported in 3.74% cases of this study, regular follow up was done, as the life expectancy in these patients is that of normal population[2,12].

CONCLUSION

Mean age of carcinoma prostate patients was found to be 65 years. The presenting complaints in majority of patients were bladder outflow obstruction similar to prostatism. Incidence of prostatic carcinoma was 3.74% in this study. Clinically BPH does not rule out histopathalogical prostatic carcinoma, therefore, histopathological analysis of specimens after prostatic surgery should always be done.

REFERENCES

1. Kamal F, Sadiq F, Nagi AH, Naveed IA, Hameed S, Khalid AW, et al. Incidence of prostate carcinoma in prostate biopsies. Ann K.E.Med Coll 2000; 6: 40-1.
2. Rasool M, Tabassum S.A, Chaudhry F.N. Prevalence of carcinoma in benign prostatatic hyperplasia. Pak J of Surg. 2002; 18: 9-12.
3. Joseph C, Presti JR, Neoplasm of the prostate gland. In: Emil AT, Jack WM. Smith's General Urology.15th ed. Columbus: Mc Graw Hill, 2000: 406-17.

4. Boring CC, Squires TS, Tong T, Cancer statistics 1993. Cancer J Clin 1993; 43:7-26.
5. Spapen SJ, Damhuis RAM, Kirkel WJ.Trends in the curative treatment of localized prostate cancer after the introduction of prostate specific antigen: data from the Rotterdam cancer registry. Br J Urol. 2000; 85: 474-80.
6. Iqbal N, Bhatti AN, Hussain S. Role of digital rectal examination and prostate specific antigen in detecting Carcinoma prostate. J Coll Physicians Surg Pak 2003; 13: 340-2.
7. Siyal AR, Shaikh SM, Shaikh AR, Surahio AW. Prostate Cancer in Rural Sindh: a six year clinicopathological experience. J Surg Pak 1999; 4: 10-12.
8. Gerald W, Chodak MD, Harry W, Schocnberg MD. Early detection of prostate cancer by routine screening. JAMA 1984; 252: 3261-4.
9. Brossner C, Bayer G, Madersbacher S.Twelve prostate biopsies detect significant cancer volumes. Br J Urol. 2000; 85: 705-7.
10. Bajwa IA, Subhan GM, Akhter FK.Comparative significance of prostate specific antigen and prostate acid phosphatase in prostatic carcinoma. Ann K.E.Med Coll 1998; 4: 24-8.
11. Chodak.GK et al: Results of conservative management of clinically localized cancer. New Eng J Med 1994; 330: 242.
12. Forrest APM, Carter IB, Macleod IB. Carcinoma prostate. In: Principles and practice of Surgery.3rd ed. London: Churchill Livingstone 1999; 542-3.
13. Iqbal SA, Sial K, Problems in the management of carcinoma prostate. Specialist Pak Med Sci 1995; 11:95-101.
14. Mittal BV, Amin MB, Kinare SG. Spectrum of histological lesions in 185 consecutive prostatic specimen. .J Postgrad Med. 1989; 35: 157-61.
15. Mohammad AZ, Alhassan SU, EdinoST, Ochichao Histopathological review of prostatic diseases in Kano, Nigeria. Niger Postgrad Med J. 2003; 10: 1-5.
16. Epstewin JI, Walsh P.C, Carmichael M and Brendler C.B. Pathologic and clinical findings to predict tumor extent of non-palpable prostate cancer JAMA 1994 ; 271:368.
17. Zahid MA. Prostatic enlargement: review of symptomatology in 125 cases. Pakistan Institute of Medical Sciences. J Surg 1990 ; 1: 25-26.
18. Richard G.R. BPH, New guidelines based on symptoms & patient preference. Pak Med J 1996; : 23-28.
19. Hayakowa T, Mitsuya H, Kojima M, Hayase Y, Clinical study on prostatic cancer detected incidentally by transurethral resection of the prostate.Hinyokika Kiyo 2002; 48: 13-16.
20. Tanaka M, Suzuki N, Nakatsu H, Murakami S, Matsuzakio, Shimazaki J. Stage A prostate cancer comparison of subclacification between Japanese rule and TNM and outcome. Hinyo Kika Kiyo 2003; 49: 579-82.
21. Khan RA, Khan S, Malik AZ. Prevelence of carcinoma in benign prostatic hyperplasia. Pak J Surg 2002; 18: 9-12.
22. Kamal F, Sadiq A, Nahi AH, Naveed IA, Hammed S, Khalid AW, et al. Incidence of prostate Carcinoma in prostate biopsies. Ann K.E. Med Coll 2000; 6: 40-1.
23. Mai KT, Isotalo PA, Green J, Perkins DG, Marash C, Collin JP. Incidental Prostatic adenocarcinoma and putative premalignant lesions in TURP specimens collected before and after the introductions of prostate specific antigen. Arch Pathol Lab Med 2000; 124: 1454-6.
24. Epstein JI, Pathology of adenocarcinoma of the prostate.In: Walsh pc, Retik AB, Vanghan ED, Wein AJ, eds.Campbell,s urology. 7th ed.1998: 2497-503.

ABDOMINAL WOUND DEHISCENCE: FREQUENCY AND RISK FACTORS

MUHAMMAD SALEEM SHAIKH, SIKANDAR ALI SHAIKH, BASHIR AHMED SHAIKH, AKLIMA ABRO, SAIMA SIKANDAR

ABSTRACT

Objective *To determine the frequency and associated risk factors in patients with abdominal wound dehiscence.*

Design: *A descriptive study*

Place and Duration of Study:
Surgical Unit-I, Chandka Medical College Teaching Hospital, Larkana, between May 2002 to April 2005.

Patients and Methods:
This study included patients with various etiologies of emergency and elective midline laparotomies. The patients operated with other incisions were excluded. The data obtained was analyzed for each patient and postoperative complications were documented.

Results: *Out of total 300 patients, 16 developed wound dehiscence giving an overall frequency of 5.33%. Age ranged from 10-82 years with mean age of 33.5. Male to female ratio was 1:0.58. The frequency was greater in males than females with ratio 3:1. Majority of the patients had gut perforation with peritonitis. Out of twenty one patients with hypoalbuminemia, 09 develops wound dehiscence. Emergency surgery showed a higher frequency of wound dehiscence 7% (14/200) compared to elective surgery 2% (2/100). Wound infection was a major factor to wound failure. Old age was also associated with greater frequency. The mortality rate of abdominal wound dehiscence was 25%, due to septicemia and multiple organ failure.*

Conclusion: *Abdominal wound dehiscence still continues to be a major postoperative complication, with a high morbidity and mortality, and has significant impact on health care cost. The significant risk factors in this study were primary disease presented with peritonitis, emergency surgery, old age, male gender, wound infection and technique of closure. Less significant factors were jaundice, uremia, diabetes, and type of suture material used.*

KEY WORDS:- *Wound dehiscence , Burst abdomen, Laparotomy, Risk factors.*

Correspondence:
Dr. Muhammad Saleem Shaikh
Department of Surgery
Chandka Medical College
Larkana.

INTRODUCTION

Abdominal wound dehiscence is defined as postoperative separation of abdominal musculo-aponeurotic layers, which is recognized within days and requires some form of intervention during the same period of hospitalization[1]. It is a major catastrophe, which can complicate any

abdominal surgery and may occur without warning[2]. The dehiscence can be complete or partial. The diagnosis may be obvious, if evisceration is present. Discharge of serosanguinous fluid from the incision precedes dehiscence in 23-84% of cases[3]. The average postoperative day of dehiscence in large reviews is about 7, but may range from 2 to 21 days[4]. Wound dehiscence is regarded as a major postoperative complication as it leads to increased morbidity and mortality by increasing the hospital stay, increasing the cost of treatment and exposing the patient to a second operation[5]. The over all morbidity and mortality figures are reported to be around 30% and 16% respectively[6,7]. The approach to non-healed wounds is an interdisciplinary challenge that should not be underestimated. Better understanding of complex cascade helps our approach to wound healing and its possible failure[8]. This study was carried out to determine the frequency and risk factors for abdominal wound dehiscence in a tertiary care hospital.

PATIENTS AND METHODS

This study was carried out at Surgical Unit I, Chandka Medical College Hospital, Larkana, between May 2002 to April 2005. A total of 300 patients, admitted in our unit, who under went elective or emergency laparotomy, between above mentioned period were included. A specially designed proforma was filled for each patient. Assessment was done by detailed history and clinical examination including use of steroids, irradiation, other chronic illnesses and any malignancy. Nutritional status was also assessed. The investigations carried out were complete blood picture and ESR, serum electrolytes, blood sugar, urea and creatinine, liver function test (LFT) and serum albumin. X-ray chest, abdomen and ultrasound abdomen were also performed. The category of surgery, whether emergency or elective, was assessed. The patients in critical condition were initially resuscitated. The operative findings were recorded including type of incision, method of closure and type of suture material used.

The postoperative course of wound was monitored including redness, oedema, and nature of discharge if any. Other postoperative complications were also documented. The wound dehiscence was categorized into two groups i.e. partial and complete. Patients with wound failure in which the intestines had not eviscerated, but stuck to the edges was labeled as partial (incomplete) wound disruption. These were managed conservatively by gentle bedside debridement, daily dressing and abdominal binders. Skin was closed without repairing fascia, knowing very well that these patients may develop incisional hernia later on. Patients with acute wound disruption with evisceration of intestines were labeled as complete wound dehiscence. These were managed in emergency by closure of the abdomen en-mass with tension sutures.

RESULTS

A total of three hundred patients with various etiologies of emergency and elective laparotomies, were included in this study. Age ranged from 10 to 82 years with mean age of 33.5 years. Majority of the patients were between 20 to 40 years (42%), followed by 50-70 years (27.33%). There were 190 males patients with male to female ratio of 1:0.58. After preoperative measures, surgery was performed through midline incision. In this study overall incidence of abdominal wound dehiscence was 5.33% (16/300). The rate of wound dehiscence in emergency laparotomies was 7% (14/200) of which 10 were males and 4 females, while in elective laparotomies it was 2% (2/100) and both were males. The overall frequency in males was quite higher (male to female ratio 3:1). There was also increasing tendency towards wound dehiscence with increasing age above 50 years and the highest risk was found in patients more than 60 years of age.

Among emergency group, most of the patients were having perforated viscus and gangrenous bowel. They presented as peritonitis and intestinal obstruction respectively, while in elective surgery patients (n 2), both were having colorectal carcinoma where abdomino-perineal resection was performed (table I). In 12 patients of wound dehiscence serosanguinous discharge was noted prior to failure. All cases initially developed wound infection.

Among 300 patients, 47 (15.67%) developed wound infection (39 were after emergency surgery and 8 after elective laparotomy). Out of 47 wound infection cases, 4 developed partial wound dehiscence while 12 had complete wound disruption. This study showed that 21 patients had serum albumin level below 3.5 mg/dl and 4 developed wound dehiscence (19.05%) while 279 patients were having serum albumin above 3.5 mg/dl, and 12 developed wound disruption (4.30%). Out of 30 patients having urea level above 80 mg/dl, 3 developed wound dehiscence (10%) while in rest of the 13 patients of wound failure group urea level was <80 mg/dl. In this study, 3 patients were having jaundice but none had developed wound dehiscence. Twenty four patients were diabetic of whom 4 (16.67%) developed wound dehiscence, while among 276 of non-diabetic group, 12 developed the same (4.35%). Four patients were on long term steroid therapy, one of them had wound disruption (25%) (table II). Over all mortality rate in this study was 4.67% (14/300). Twelve dies after emergency surgery and 2 after elective surgery. Among them 4 had burst abdomen.

TABLE-I DISEASE PATTERN IN PATIENTS WITH WOUND DEHISCENCE

Primary Disease	Surgery Emergency/Elective	No. of Patients	Wound dehiscence	%
Ileal perforation	Emergency	44	4 (1 Partial)	9.09
Perforated appendicitis	"	34	3 (1 Partial)	11.33
Peptic ulcer perforation	"	38	2	5.26
Large gut volvulus	"	14	2 (Gangrenous loop)	14.29
Fire arm injuries	"	26	2 (multiple colonic perforations)	7.69
Malignant intestinal obstruction	"	6	1	16.67
Benign intestinal obstruction	"	20	-	-
Miscellaneous	"	18	-	-
Carcinoma stomach	Elective	12	-	-
Colorectal carcinoma	"	14	2 (partial)	14.29
Large ovarian cyst	"	8	-	-
Ileocaecal mass	"	20	-	-
Miscellaneous	"	46	-	-

TABLE-II THE RISK OF ABDOMINAL WOUND DEHISCENCE WITH REGARD TO VARIOUS FACTORS

Factors	No. of Patients	Wound dehiscence	%
Emergency surgery	**200**	**14**	**7.00**
Elective Surgery	**100**	**2**	**2.00**
Wound infection	**47**	**16**	**34.04**
Non-infected cases	**253**	**-**	**-**
Serum albumin <3.5 mg/dl	**21**	**4**	**19.05**
Serum albumin >3.5 mg/dl	**279**	**12**	**4.3**
Blood urea >80 mg/dl	**30**	**3**	**10.00**
Blood urea <80 mg/dl	**270**	**13**	**4.81**
Diabetic	**24**	**4**	**16.67**
Non-Diabetic	**276**	**12**	**4.35**
On steroid therapy	**4**	**1**	**25.00**
No steroid therapy	**296**	**15**	**5.07**
Jaundice	**3**	**-**	**-**
No-Jaundice	**297**	**16**	**5.39**

DISCUSSION:

Wound dehiscence is a very terrifying complication after laparotomy with a high mortality rate. Despite good medical care, better sterilization techniques and availability of better suture material, abdominal wound dehiscence continues to be a major postoperative problem. Three basic etiological factors recognized are defective or delayed wound healing, increased intra-abdominal pressure and improper surgical technique[9]. In this study, male to female ratio among wound dehiscence group was 3:1, while it is quite low in Hamton study[11] and insignificant in another study[1]. More than 50 % of the patients with wound dehiscence were above 50 years of age and malnourished . This advanced age as a risk factor was also shown in other studies[1,5,12] .

Anaemia, uremia, diabetes and jaundice are regarded as non-significant variables as some studies showing increased predisposition to wound dehiscence while others do not[5, 6,12,13,14]. In present study these factors may also be considered as non-significant. Low albumin was associated with wound dehiscence in 80% of patients, as observed by Crim et al. Wound infection is probably the commonest event leading to abdominal wound dehiscence.[6,11,16] The subcutaneous infections heal without consequences after local wound treatment while deep infections were causing problems. A recent study has shown that infection rate is higher in cases operated upon in emergency, operation over large gut, and surgery in contaminated and dirty cases[17].

In this study, the overall frequency of abdominal wound dehiscence was 5.33%. The international figures are 1-3%. Wolf in 1950 and Erfon in 1965 reported an incidence of 2.4 % and 2.2% respectively. Mendoza et al. in 1972 gave incidence of 2.2%. Bucknell in 1982 gave figures of 3.8% for layered closure and 0.8% for mass closure in a study of 382 cases[19]. Lodhi et al reported an incidence of 8.3% with mass closure of laparotomy wounds using polyglycolic suture[20]. A recently carried out meta-analysis of abdominal closure techniques has demonstrated the lowest risk of wound dehiscence with the use of delayed absorbable sutures[21].

The rate of wound failure in emergency surgery was high because of multiple factors. Emergency laparotomies are usually done for peritonitis, intestinal obstruction etc, in patients who may have septicemia or haemodynamic instability. Both the disease and the technique for closure may have impact on outcome. Wound closed by registrars were found to have higher incidence of wound failure than done by Consultants in emergency laparotomies (13.2% vs 4.3%), as shown by Irvin et al[22]. Technique of abdominal closure is very important, big bites of the tissue edges with 1cm distance in between two stiches play crucial role in prevention of wound failure. In this study, we used both types of suture materials i.e. non-absorbable polypropylene and delayed absorbable polyglycolic acid, and we experienced no difference between the type of sutures used.

The mortality rate in international literature for wound dehiscence and re-suturing is reported from 10% and 18% to 36% in different series[23,24]. In this study, mortality rate was 25% (4/16) and the major cause of death was poor general condition of the patient, associated with malnutrition along with septicemia and multiple organ failure.

CONCLUSION

It is concluded that wound dehiscence remains one of the most important complications with high mortality rate and significant impact on health care cost. Elderly patients

with underlying malignancy and those developing postoperative wound infection were at higher risk. Special care should be taken for the elderly patients as they have more chances of wound failure. Serosanguinous discharge from the wound should be considered as an early sign of wound disruption that requires immediate action. Early examination of the wound is recommended after emergency laparotomy. Rate of wound dehiscence is highest in patients undergoing the emergency laparotomy, associated with low albumin and malnourishment.

REFERENCES

1. Mark A, Carlson MD. Acute wound failure. Surg Clin N Am. 1997; 77:607-36.
2. Jenkins TPN. The burst abdominal wound. A mechanical approach. Br J Surg. 1976; 63:873.
3. Bannerjee SR, Daoud I, Russell JC et al. Abdominal wound evisceration. Curr Surg 1983; 40:432.
4. Kainberly RC, Coxe WS, Koontz AR. Abdominal wound disruption. Trans South Surg Assoc. 1962;74:300.
5. Mekla J, Kiviniemi H, Juvonen T, Laitenin S. Factors influencing wound dehiscence after midline laparotomy Am J Surg. 1995;170:387-90.
6. Pavildis TE, Galatianos IN, Papaziogas BT et al. Complete dehiscence of the abdominal wound and incriminating factors. Eur J Surg. 2001; 167:351-5.
7. Riou JP, Cohon JR, Jhonson H. Factors influencing wound dehiscence. Ann J Surg. 1993;166:28.
8. Clard RAF. Wound repair: Over view and general considerations. In the molecular and cellular biology of wound repair, 2nd Ed. New York, Plenum press 1996;P:3.
9. Ellis H. The abdominal wall. In Shwartz SI, Ellis H, Maingot's abdominal operations. I 9th Ed Stanford Appleton & Lange; 190:197-99.
10. Hampton JR. the Brust Abdomen. Br. Med J. 1963;2:1042.
11. Lodhi F, Ayaz M, Majeed HJ et al. Etiological risk factors responsible for abdominal wound dehiscence and their management. Ann K E Med Coll 1999;5:312-4.
12. Col C, Soran A, Col M. Can post operative abdominal wound dehiscence be predicated? Tokai J Exp Clin Med 1998;23:123-7.
13. Armstrong CP, Dixon JM, Duffy SW et al. Wound healing in obstructive jaundice. Br J Surg. 1984:71:267.
14. Riou JP, Cohen Jr, Johnson HJR. Factors influencing wound healing Am J Surg1992;163:324.
15. Crim MC, Munro HN(ed). Protein and amino acid. Modern nutrition in health and disease 8th Ed Philadelphia, Lea and Figbar 1994;P:27.
16. Niggerugge H, Hansen E, Trimbos B, Van J, Zwaveling A. Mechanical factors influencing the incidence of burst abdomen. Eur. J Surg.1995;161:655-61.
17. Graham J, Stevenson T, Mchenry R. the association of intra-abdominal infection and abdominal wound dehiscence after laparotomy. J Surg Res. 2003;109:130-7.
18. Van Gelder D One hundred years of abdominal wound dehiscence and nothing has changed. Hernia. 200;4:302-4.
19. Bucknell TE. Factors in influencing wound complications a clinical experimental study. Ann R Coll Surg; 1983;65:71-7.
20. Lodhi FB, Asrar R, Akram M, Hussain R. Incidence of abdominal wound dehiscence (Midline Vs Para median incision closed with vicryl No:-1. Ann KE Med Coll. 2001;7:38-40.
21. Van't Riet M, Steyer berg EW, Nellensteyn J, Bonjer HJ, Jeakal J. Meta-analysis of techniques of closure of midline abdominal incisions. Br. J Surg. 2002;89:1350-6.
22. Irvin TT, Koffman CG, duthie HL. Layer closure of laparotomy wounds with absorbable and non-absorbable suture materials. Br J Surg 1976;63:793.
23. Poole GV. Mechanical factors in abdominal wound closure, the prevention of abdominal wound dehiscence. Br. J Surg 1998;97:631-40.
24. Madsen G, Fischer L, Wara P. Burst Abdomen: Clinical features ad factors influencing mortality. Dan Mad Bull 1992;39;183.

VAGINAL BIRTH AFTER CAESAREAN SECTION

GHUFRANA UMER MEMON, GHAZALA AHMED AZAM

ABSTRACT

Objective

To determine the outcome of trial of labor after previous one caesarean section due to non-recurrent cause and evaluate the maternal and perinatal mortality and morbidity after trial of scar.

Study Design: *Descriptive study*

Setting: *It was conducted in Obstetrics & Gynaecology Unit – 1, Civil Hospital Karachi from January 2003 to January 2004.*

Patients and Methods:

The selected subjects in our study were the women with previous one caesarean section due to non-recurrent cause. Singleton pregnancy, adequate pelvis, spontaneous onset of labor were the criteria for trial of labor. The total number of 3612 deliveries were conducted during this study period, whereas, 2624 patients were delivered by caesarean section. Out of these 84 patients formed the cohort, where 34 had elective lower segment caesarean section (LSCS) and 50 were found suitable for trial of scar.

Results *Fifty patients underwent trial of labor, of whom 31 had successful vaginal delivery. The success rate was 62% while 19 (38%) patients delivered by repeat caesarean section due to failed trial of scar. The 42.10% of patients had caesarean section due to unsatisfactory progress of labor, 26.31% due to fetal distress, whereas 15.78% patients had caesarean section due to scar tenderness but there was only one partial scar dehiscence that was noticed during operation. 10.5% patients had non-progress and fetal distress at the same time. Out of 31 patients who were delivered after successful trial, 70% had spontaneous vertex delivery, 16.2% by forceps vaginal delivery, 9.6% by vacuum extraction and one patient who had breech presentation, delivered by assisted breech vaginal delivery.*

There was no maternal death or rupture of uterus in our study, nor any perinatal morbidity or mortality recorded. Only one case of scar dehiscence was seen during emergency LSCS, which was not associated with any complication.

Conclusion: *A trial of labor in selected patients with previous one caesarean section is the reasonable option, if patients are carefully selected and monitored.*

KEY WORDS:- *Previous caesarean section, Vaginal delivery, Trial of scar.*

INTRODUCTION

The Gragin's motto "once a caesarean section, always caesarean section" no longer holds true. Several studies suggest that in women with prior caesarean section for a non-recurrent cause, a trial of labor is safe and effective than repeat caesarean section[1-7]. Patient selection for trial of labor remains an important aspect of management with the previous caesarean section. Singleton pregnancy, cephalic presentation, average size baby (2.5-3.8kg

Correspondence:
Dr. Ghufrana Umer Memon
Obstetrics & Gynaecology, Unit I
Dow University of Health sciences & Civil Hospital
Karachi.

approximately), previous caesarean section for non-recurrent cause, adequate pelvis and spontaneous onset of labor are selection criteria for trial of labor, while macrosomia, multiple pregnancies, previous lower segment vertical scar, two or more prior caesarean section and post term pregnancy with an unfavourable cervical score are selection criteria for repeat caesarean section[8-13].

During the past twenty years, there has been a dramatic increase in the rate of caesarean section. However, due to a wide spread adaptation of transverse lower segment incision, obstetricians have adopted the policy to allow trial of scar in selected cases with previous caesarean section. This policy has helped them a lot to decrease the rate of caesarean section. Type of previous uterine incision has a greater impact upon the outcome of successful vaginal delivery. Obstetricians do not allow a trial of scar following a classical incision, as a universally accepted policy of high-risk of rupture of such previous scar. During vaginal delivery after a previous lower segment caesarean section, the uterine rupture rate is 0.3%, while 0.05% women experience perinatal death and 0.05% require hysterectomy. Rupture continues to be associated with serious adverse outcome. Above studies suggest that incidence of rupture during trial of labor is low and appear to be associated with better outcome than rupture of unscarred uterus[4,14,15].

Previous caesarean section cannot be sole indication for a repeat caesarean section especially if the previous caesarean section was done due to non-recurrent cause. The primary objective of the study was to determine the outcome of trial of labor with a previous caesarean section for non-recurrent cause.

PATIENTS & METHODS:

This descriptive study was conducted at Civil Hospital Karachi, Obstetrics & Gynaecology Unit – 1 from January 2003 to January 2004. Study was conducted on 84 patients with previous caesarean section (CS) due to non recurrent cause and included both booked cases of Civil Hospital Karachi (CHK) and non booked cases who came through emergency in established labor or referred from any other hospital. Singleton pregnancy, adequate pelvis, average size baby (2.5-3.8 kg), no medical or obstetrical problem and spontaneous onset of labor were selection criteria for the trial of labor. The patients with contracted pelvis, Previous more than one CS, previous classical caesarean section, post term pregnancy with unfavorable cervical score, previous C/S with medical or obstetrical complications in present pregnancy were excluded.

On admission in labor room routine clinical examination was done to assess the uterine contractions, fetal heart sounds and Bishop score. In addition partogram was maintained half-hourly with maternal and fetal monitoring with stethoscope, fetoscope and CTG. Scar tenderness was assessed. After delivery resuscitation of newborn was done by pediatrician. Birth weight and Apgar score were noted. Patients observed in ward for any complication. The patients usually discharged on second day of delivery, whereas patients with caesarean section discharged on seventh day of operation after removal of stitches and all facts recorded in the proforma designed for this purpose.

RESULTS

Eighty four patients were selected for trial of labor with prior caesarean section due to non-recurrent cause. Thirty four patients had elective LSCS due to different obstetrical causes. Remaining 50 patients (30 non-booked and 20 booked cases) formed the cohort. Nineteen patients delivered by caesarean delivery after failed trial of scar and thirty-one had successful vaginal delivery. Fifty patients went into spontaneous labor and 30 (62%) were delivered vaginally of whom 23 delivered by spontaneous vertex delivery, 5 delivered by forceps vaginal delivery and three by vacuum extraction. One case with breech presentation came in advanced labor with good Bishop's score. Trial of labor given for 6 hours and patient delivered by assisted breech vaginal delivery. Indication of forceps was maternal exertion and prolonged second stage of labor. Wide episiotomies were made to facilitate delivery. No extension of episiotomies and PPH were noted. Three patients found suitable candidates for vacuum delivery. Indications were mild PIH and prolonged second stage of labor. There was no laceration or extension of episiotomy in these cases.

Babies were of average size (2.5 – 3.8) kg. Nineteen patients had failed trial of scar. Repeat emergency LSCS done on nine (43.36%). In our study eight (42.10%) patients had caesarean section due to unsatisfactory progress of labor. Five (26.31%) due to fetal distress revealed by CTG and fetoscope. Three (15.78%) patients had scar tenderness. We did not encounter any rupture of scar only one partial scar dehiscence noted. During trial of labor two (10.52%) patients had caesarean section, due to non-progress and fetal distress at the same time. One (5.26%) patients was very much afraid of outcome of trial of labour because she had very slow progress. She forced for operation after eight hour trial.

Postpartum haemorrhage noted in 6% cases dealt with emergency LSCS. Due to PPH patients were anaemic (9.2%) and received blood transfusion according to their loss. Puerperal pyrexia was least in VBAC (2%) while it was highest (8%) following emergency caesarean section. Wound sepsis observed in 2% and UTI 4.2% following CS while it was just 2% in VBAC.

In our study, we avoided macrosomic babies. We

estimated the weight of the babies through scan and on P/A examination. All babies weigh less than 4kg. In our study, eight babies weighing more than 3.8kg delivered by emergency LSCS and four by SVD. Ten babies weighing between 2.5-3.8kg delivered by C/S while 22 by SVD. One low birth weight (LBW) baby delivered by C.S and five babies delivered by SVD. In spite of LBW, babies were active and delivered with good Apgar score. There was no mortality observed. After VBAC hospital stay was 2-3 days while with caesarean section, 7-8 days.

DISCUSSION

In our society, it is the obligation of the obstetrician to achieve a vaginal delivery as often as possible and to that end in patients previously delivered by C/S an opportunity should be given to deliver them vaginally. There used to be an old slogan that once a caesarean section always a caesarean section is no more valid now. This slogan was made by Edward Cragin in May 1916. The reason behind this slogan was a uterus with previous incision is too weak to tolerate the trial of scar[1]. But it is not true, as current rate of vaginal birth after caesarean section is very high and it is very successful, specially if the indication of the previous caesarean section was non recurrent like fetal distress (FD) and malpresentation[17,18,19].

Our study demonstrates that trial of scar is possible in carefully selected patients with a non-recurrent indication for previous LSCS. The overall C/S rate in 2003 in our hospital was 33.3%, which is quite high as compared to the C/S rate of 12% in the United Kingdom. While two studies conducted in Pakistan showed successful VBAC rate by 90% and 78.7% respectively[4,6].

In trial of labor careful supervision of labor is essential. Progress of labor assessed by repeat abdominal palpation, vaginal examination and fetal heart sounds auscultated regularly. Progress of labor, is recorded on partogram. After delivery of baby the digital examination is avoided. The obstetricians are reluctant to perform the trial of scar because of the risk of rupture of the uterus, which no doubt can affect the outcome of trial. In order to reduce the rate of caesarean section, the number of primary caesarean section should be minimized as this is the main cause leading to the subsequent caesarean sections.

Assessment of the pelvis is very important for the trial of scar. It can be done clinically or through x-ray pelvimetry. However, a routine x-ray pelvimetry in a patient whom had delivered through caesarean section, can increase the chances of repeat caesarean section. The capacity of the pelvis can judged best at the time of established labor due to the giving up of the pelvis. In most of the studies, patients with the radiological small pelvis have delivered vaginally without any disastrous outcome to babies or mothers[21,22,23]. So we can say that the major effect of x-ray pelvimetry is increase in the rate of repeat or elective caesarean section.

In our hospital anaesthetists prefer to use general and spinal anaesthesia. Although none of our patients had cpidural analgesia. Previous views like the regional anaesthesia can mask the pain of uterine contractions is no more valid and fetal distress which is more obvious during rupture can be detected and leads to the early intervention and good results can be expected. In our study, it was noticed that the duration of labor was prolonged in those cases with previous one caesarean section than those who had a vaginal delivery. It was also proved in some other studies[24]. Therefore, we can say that primiparous who has had a caesarean section because of dystocia in labor, has duration of labor similar to nullliparous. An obstetrician should always be prepared for the fact that they may not have a rapid progress during labor.

In the past use of oxytocin for trial of labor was controversial and it was thought to be a risk factor. However, later studies proved that there is no increase risk of rupture of scar with judicious use of oxytocin. If the dose of oxytocin is high it can be dangerous. The dose may be adjusted with careful observation of the uterine contractions preferably with the intrauterine pressure catheter. Although in this study we did not use oxytocin neither monitor contractions with the intrauterine pressure catheter, as this is not a routine practice. The contractions were monitored per abdominally and through cardiotocography. This method is also acceptable if done carefully and it is wise to maintain three contractions per ten minutes with careful watching for scar tenderness. The best way to avoid these complications is to keep a careful watch on the activity of the uterus as the labor progresses so that the significant and appropriate adjustment of the dose of oxytocin can be made and the over stimulation of the uterus can be prevented. This is especially important at the end of the first stage of labor. As at this time, there is natural rise in intrauterine pressure[25].

The number of caesarean section may be reduced by external cephalic version at term for breech babies. No maternal death occurred in our study, but it is a well-known fact that the caesarean section carries the extreme risk to the maternal life, especially those who are having a failed trial of scar than a successful trial. Throughout the twentieth century haemorrhage, sepsis, pulmonary embolism and anaesthesia have been leading cause of death after caesarean section. In confidential inquiries in 1982-84, haemorrhage accounted for 6% of the deaths associated with caesarean section.

REFERENCES

1. Gragin EB, Conservatism in obstetrics. NY-Med-J 1916; 104:1-3.
2. Maher CF, Cave DG, Haran MV, Caesarean section rate reduced. Aust-NZJ Obstet Gynecol. 1994 34 : 389-92.
3. Walmsley K. Vaginal birth after lower caesarean section. Mod-Midwife, 1994; 4: 20-1.
4. Meehan FP. Caesarean section – Past present and what of the figure? Obstet-Gynaecol. 1988; 8: 201-5.
5. Usmani AT, Ahsan L. Trial of scar – A three years retrospective study. J Anaesth. Critical Care 1999; 5: 21-5.
6. Taffel SM, Placek PJ, Moin M. 1988 U.S. caesarean section rate at 24.7 per 100 births a plateau? N Engl J Med 1990; 323: 696-700.
7. Duff P. Southmayd K, Read JA. Outcome of trial of labor in patients with a single previous low transverse caesarean section for dystocia. Obstet Gynecol 1988; 71: 380-84.
8. Bashir R, Khattak K, Vaginal delivery after caesarean section . JAMA 2000; 12:34-5.
9. Pal J, Ramadan S, Parveen T, Jan A, Momin A. Use of oxytocin in a uterus with previous caesarean section. Pakistan J Med Sc 2000; 16: 87-91.
10. Appleton B, Rasmussen M, Readman E, Sale F, Permezel M, Vaginal birth after caesarean section: an Australian multi center study. Aust NZJ Obstet Gynaecol. 2000; 40: 87-91.
11. Young JH, Caesarean section the history of the operation from the earliest times. London Lewis 1944.
12. Naqvi NH, James B; Operation of the first successful caesarean section in England. Br J Obstet Gynaecol 1985; 92: 468-72.
13. Marshall CM, Cox LW. Transactions of XIIth British Congress of Obstetrics & Gynaecology. Bourne, A, W. Nixon, WCW, eds. London: Astral Press, 1949.
14. R Johansson Obstetrics procedures. D. Keith, Edmons. Dew Hurst's text book of Obstetrics & Gynaecology, sixth edition; Blackwell Science, 1999: 308-29.
15. Hawkins J, Caesarean section, chapter 19. Sir J S Worthy, 8th edition, Boney's Gynaecological Surgery.
16. Anna S.L, Rihcard M.F., Eleanor K.L., Arnold L.M., Richard H.P.; Risk factors associated with uterine rupture during trial of labor after caesarean delivery. A case control study Am J. Obstet Gynecol 1993; 168: 1358-63.
17. Odeh M, Tarazova labor, Wolfson M, Oettinger M. Evidence that women with a history of caesarean section can deliver twins safely. Acta Obstet Gynecol Scand. 1997; 76: 663-6.
18. Cheng M, Hannah M, Breech delivery at term: A critical review of the Literature: Obstet Gynecol 1993; 82: 605-18.
19. Robert L.J., Beards S.A. worth, Trew G. Labor following caesarean section: current practice in the United Kingdom Br J Obstet Gynaecol. 1994; 101: 153-5.
20. Lunan C.B., Vaginal delivery after caesarean section in sub-Saharan Africa; British Journal of Obstetrics and Gynaecology 1997; 104: 1335-8.
21. Flamm B.L. vaginal birth of caesarean delivery: Results of a five year multicenter collaborative study. Obstet Gynecol 1990; 76: 750-4.
22. Thubisi M., Ebrahim A, Moodley J, P Shweni..M. Vaginal delivery after previous one caesarean section: Is X-ray pelvimetry necessary? 1993; 100: 421-4.
23. Ron El R. Triplet, quadruplet and quintuplet pregnancies. Management and outcome. Acta Obstet Gynecol Scand 1992; 71L 347-50.
24. Phelan J.P., Ahn M.O., Diaz F. Twice a caesarean always caesarean ? Obstet Gynecol 1989; 72: 161-5.
25. Flamm B.L, Lim O.W., Jones C. Vaginal birth after caesarean section: Results of a multicenter study. Am J. Obstet Gynecol 1988; 1079-85.

COMPARISON OF COMPLICATIONS BETWEEN MAYO'S REPAIR AND MESH REPAIR (PRE-PERITONEAL APPROACH) FOR PARA-UMBILICAL HERNIA

NUR SAEED, MUHAMMAD SOHAIL KHAN, SHAHAB A. SYED.

ABSTRACT

Objective

To compare the complications of Mayo's technique of repair of para umbilical hernia with mesh repair.

Patients and Methods:

This study was conducted in the Department of Surgery at Nishtar Hospital, Multan. Fifty patients were recruited into study randomly. Two groups of 25 each, were made. Routine investigations were performed. All patients underwent surgery under general anaesthesia. Standard technique of repair was used in either groups. Complications were noted on a proforma designed for that purpose. Spearman's rank correlation coefficient test. A 'p' value of <0.05 was considered significant.

Results *Ten (20%) complications were observed. The main complications were wound haematoma in four patients (8.0%), wound infection in two patients (4.0%), seroma formation in two patients (4%), sinus formation in one patient (2.0%), mesh infection in one patients (2.0%) and no recurrence in any patients. Out of these 10 patients who developed complications, eight (16.0%) were in group-I (Mayo's technique) and two (4.0%) were in group-II (Mesh repair). All were managed conservatively.*

Conclusion: *Mesh repair found to be superior to the Mayo's technique in terms of complications.*

KEY WORDS:- *Para-umbilical hernia, Mesh repair, Mayo's technique.*

INTRODUCTION

Para umbilical hernia is quite common in multiparous women and obese people. Females are affected five times more often than males[1]. There are certain risk factors believed to have a role in causing para-umbilical hernia, as they produce increase in intra abdominal pressure[2,3]. These risk factors are pregnancy, chronic cough, ascites, chronic constipation and flabbiness of abdominal muscles.

Correspondence:
Dr. Nur Saeed,
Department of Surgery,
Nishtar Hospital,
Multan,

Usually the hernial sac contains omentum, but gut (both small and large) may be present in it, which if obstructed can give rise to other gastrointestinal symptoms like nausea, vomiting or features of intestinal obstruction[1]. Most patients come in surgical out patient department, mainly with pain or deformity in or around the umbilicus[4]. Some patients present in emergency with symptoms and signs of strangulation in which case the mortality is high[5].

Operative repair of defect is carried out, where ever possible, but those having asymptomatic hernias or those who are unfit for any kind of surgery could be managed conservatively, by reducing their weight[6] or by using belts. There are many techniques to repair para-umbilical hernia. Classical repair of para-umbilical hernia is Mayo's[7], and now tension free Mesh repair has been

introduced, which utilizes an artificial prosthesis to cover the defective area[8]. This study was conducted to compare the complications in Mayo's repair with mesh repair, (pre-peritoneal approach).

PATIENTS AND METHODS

This was a comparative study of fifty patients of para-umbilical hernia operated over a period of two years. All the patients having non-obstructed, non-strangulated para-umbilical hernias were included in the study. This study was carried out over a period of two years. Fifty patients were admitted in the ward through outpatient department. All patients were operated on planned list. A detailed history and thorough physical examination was carried out in each case. Patients were allotted randomly; in to each of the two groups i.e. mesh repair and Mayo's repair. Preoperative work up of the patients with complete blood examination, complete urine examination and blood sugar was done. ECG and chest x-ray of the patient 45 years and above was done and their cardio- respiratory status were assessed. All the data was recorded on the pre designed proforma. All patients received injection of 3rd generation cephalosporin pre-operatively and two doses postoperatively. All operations were performed under general anesthesia. Data about operative and postoperative complications were recorded. Haematoma was defined as collection of blood in the surgical wound. A recurrence was described as a clinically detected reducible swelling in the umbilical region. The patients were seen in the outpatient department one week post operatively to detect possible wound complications and then1,3,6,12 months post operatively.

The hypothesis was tested by Spearman's rank correlation coefficient test. A 'p' value of <0.05 was considered significant. Percentages, means were calculated. All calculations were done by SPSS version 10.0.

RESULTS

A total of fifty patients were divided into two groups. Out of these 50 patients, 40 were female and 10 were male patients. Group- I (n=25) underwent Mayo's repair. Group-II patients had tension free mesh repair (n= 25). The prosthetic material used in all cases was polypropylene mesh. The age of the patients ranged from 20 to 60 years (mean 40 years) (Table-1). The commonest mode of presentation was swelling in the umbilical region (100%), dragging pain in the umbilical region during heavy working (60%) on physical examination positive cough impulse was present in (80%).

Ten (20%) complications were observed. The main complications were wound haematoma in four patients (8.0%), wound infection in two patients (4.0%), seroma formation in two patients (4%), sinus formation in one patient (2.0%), mesh infection in one patients (2.0%) and no recurrence in any patients. Out of these 10 patients who developed complications, eight (16.0%) were in group-I and two (4.0%) were in group-II. All were managed conservatively.

DISCUSSION

Para-umbilical hernia is the commonest acquired umbilical hernia[9] and second most commonly encountered hernia following inguinal hernia[4]. According to a study carried out at North Penn Hernia institute, para-umbilical hernias were 2nd most common surgically treated hernias[4]. Para umbilical hernia is repaired with different techniques. These include Mayo's repair, Genkin's repair, open mesh repair, laparoscopic mesh repair, polypropylene plug etc[9]. Now tension free mesh repair has been introduced, which utilizes an artificial prosthesis to cover the defective area[8].

The incidence of complications and recurrence is lower in tension free mesh repair as compared to conventional repair, therefore it is concluded that prosthetic para-umbilical hernia repair can safely be performed in adults, and the rate of recurrence in different studies is low in comparison to primary tissue repair[9].

All age groups are affected, however present study showed peak occurrence in fourth-fifth decade (n-22). A study showed peak occurrence in fourth-fifth decade of life[10]. Mean age of presentation in various international studies was 57 years[11], 57.1 years[9] and 53 years[12]. Para umbilical hernias are 5 times more common in females[6]. In present study, female patients were 80%. In some other studies female dominancy was seen[9,11,12].

A study done by Arroyo A, and his colleagues showed that prosthetic repair of para-umbilical hernia is more effective than "conventional" repairs, and so the prosthetic repair of para-umbilical hernia could become the standard treatment for primary para-umbilical hernias[11]. Wound infection was found in 4% of our cases which is quite low as compared to other local studies like 16.6% by Baloch Q[10]. The reason for low infection rate in our study is the judicial use of prophylactic antibiotic and particular attention given to sterilization. In another international study by Millikan, reported wound infection was less than 2%[12].

In present study wound haematoma was found in 4% of cases. All of them were treated conservatively. None of them required aspiration or drainage. Postoperative haematoma was seen more commonly in cases of Mayo's repair as dissection leads to more chances of damage to the underlying tissues. Study by Arroyo Sebastian A,

showed wound haematoma in 2.3% of cases[9]. In present study seroma formation occurred in 4% of cases, while in some international studies incidence of seroma formation was high, i.e. 5.6%. There was one case of mesh infection requiring removal of part of mesh. Other studies like Arroyo Sebastian A, also reported 0.95% infection to mesh9. Mortality was 0%, in present study as well as in other studies[11].

Recurrence of hernia after mesh repair was 0% in our cases, which matched with other studies like study by Baloch Q, as well[10]. In an international study hernia recurrence rate was higher after suture repair (11%) than after mesh repair (0l%). Another study showed an overall recurrence rate of 0.95%[9].

In present study postoperative complications like seroma formation, haematoma, wound sepsis, were seen more often in Mayo's group, than in mesh group. Other studies suggest that the mesh repairs may be superior to the Mayo's repair in terms of hernia recurrence[9,11].

REFERENCES

1. Kingsnorth A, Bennet DH. Hernias: umbilicus, abdominal wall. In: Russel RCG, Williams NS, Bulstrode CJK, Mclean AM, Coleman DJ, Langford RM (Editors). Bailey and Love's short practice of surgery. 23rd ed. London: Arnold, 2000: 1154-55.
2. Wantz GE, Abdominal wall hernias. In: Schwatz SI (Editor). Principles of surgery. 7th ed. Vol-1. Newyork: McGraw-Hill, 1999: 1604-05.
3. Eubanks S. Hernias. In: Sabiston DC (Editor). Textbook of surgery, the biologic basis of modern surgical practice. 15th ed. Philadelphia: WB Saunders. 1997: 1227-29.
4. Goodyear J A. Broad street, Suite 100. Lansdale, PA 1996. 215-368-1122.
5. Johnstone JMS, Rintoul RF. In: Rintoul RF (Editor). Farquharson's Textbook of operative surgery. 8th ed. Edinburgh: Churchill Living Stone, 1995: 537-38.
6. Watkin DFL, Kirk RM. Abdominal wall and groin. In: Kirk RM (Editor). General surgical operations. 4th ed. London: Churchill Living Stone, 2001: 131-33.
7. George E. Wantz. Abdominal wall hernias. In: Seymour I (Editor). Schwartz. Principles of surgery. 7th ed. New York. McGraw Hill. 1998.1585, 1605.
8. Deveny. Use of prosthesis in hernia repair. In: Baluch Q (Edi). Dissertation on para umbilical hernia. Karachi: 1990: 60.
9. Arroyo Sebastian A, Perez F, Serrano P, Costa D, Oliver I, Ferrer R, et al. Is prosthetic para umbilical hernia repair bound to replace primary herniorraphy in the adult patient? Hernia. 2002; 6: 175-7.
10. Baloch Q. Historical background: A Study of repair of para umbilical hernia.Karachi. 1990.40.
11. Arroyo A, Garcia P, Perez F, Andreu J, Candela F, Calpena R. Randomized clinical trial comparing suture and mesh repair of para umbilical hernia in adults. Br J Surg. 2001;88;1321-3.
12. Millikan KW, Baptista M, Amin B, Deziel DT, Doolas A. Intra peritoneal underlay ventral hernia repair utilizing bilayer expanded polytetrafluoroethylene and polypropylene mesh. Am Surg. 2003; 69:287-91.

PRESENTATION OF ENLARGED LYMPH NODES

SHAHIDA PARVEEN AFRIDI, M. A. NAUSHAD BEG, FARZANA MEMON

ABSTRACT

Objective

To find out the pathology of enlarged lymph nodes, their clinical presentation, diagnosis and treatment.

Design *Descriptive study*

Setting *Surgical Department, Sindh Govt. Lyari General Hospital, Karachi.*

Results *Total number of patients studied were 400 (262 females, 138 males). Male to female ratio was 1:1.89. Most of the patients were in younger age group. 40% were in the second decade, followed by 3rd decade, 23.2%. Majority had history of lump (92.5%), low grade fever (50.0%), cold abscess (49.25%), cough (48.0%), non healing ulcer (22.5%), discharging sinuses (21.5%), anorexia and weight loss (18.25%). Associated pulmonary tuberculosis was present in few cases. Commonest group of lymph nodes affected were cervical, 74.5% followed by axillary lymph nodes 10.5%. Pathology found was tuberculosis 63% followed by reactive changes 11.25%, chronic non specific lymphadenitis 10.50%, non Hodgkin lymphoma 6.25%, Hodgkin's disease 5.50 % and metastatic carcinoma 3.50%.*

Conclusion: *This study concludes that highest number of patients were in the second decade with female predominance. Commonest pathology noticed was tuberculosis followed by non specific lymphadenitis.*

KEY WORDS:- *Lymph node, Etiology, Lymphadenitis.*

INTRODUCTION

Lymphadenopathy is a common surgical problem. The various high risk factors are present all over the world. Commonest cause is tuberculosis in Pakistan[1] with metastatic involvement being common in western world[2]. Other causes include reactive changes, chronic non specific lymphadenitis, non-Hodgkin and Hodgkin's lymphoma. Tuberculosis is a pre-dominant cause of an adenopathy as well as mortality and morbidity worldwide. It is estimated that approximately 1.8 billion persons are infected with mycobacterium tuberculosis and there are 8 million new cases detected worldwide each year[3].

Correspondence:
Dr. Shahida Parveen Afridi
Dow Medical College and
Sindh Govt. Lyari General Hospital
Karachi.

PATIENTS & METHOD

This is an observational study conducted at Surgical Department, Sindh Govt. Lyari General Hospital, Karachi from January 1997 to June 2001. Variables studied were age, sex, clinical presentation, family history and past history of tuberculosis, related investigations and histopathology. Physical examination and related investigations were carried out and recorded on proforma made for this purpose. Laboratory investigations included complete blood picture, ESR, urine detailed report, chest x-ray. Specific investigations included Mantoux test, FNAC, AFB smear, and AFB culture from pus obtained by

aspiration. Cytology was performed in those cases where necessary, excision biopsy where diagnosis was in doubt.

RESULTS

Four hundred patients were studied. There were 138 male 262 female patients with male to female ratio of 1:1.89. Most of the patients were in the 2nd decade, 160 patients (40%) followed by 3rd decade 93 patients (23.25%) and first decade 75 patients (18.75%). Youngest patient was 2 years old and oldest was 86 years of age. Commonest presentation was swelling which was present in 370 patients (92.5%) followed by low grade fever, 200 patients (50.0%), cold abscess 197 patients (49.25%). Other patients presented with the history of cough, 192 patients (48.0%), non healing ulcer 90 patients (22.5%), discharging sinuses 86 patients (21.5%), anorexia and weight loss 73 patients (18.25%).

The commonest group of lymph nodes enlarged was cervical 298 patients (74.5%) followed by axillary lymph nodes enlargement 42 patients (10.5%), then inguinal 28 patients (7.0%). Cervical and axillary in combination in 14 patients (3.5%), preauricular 10 patients (2.5%), cervical plus axillary and inguinal in 8 cases. Pathological diagnosis and results of FNAB/C performed in 280 patients is shown in table I.

TABLE-I INVESTIGATIONS AND PATHOLOGY

S No.	Investigations	Results	No. of Patients & %
(1)	FNAB/C	AFB Smear	40 +ve (14.28 %)
	280 patients		240 – ve (85.72%)
		AFB Culture	183 +ve (65.35 %)
			97 -ve (34.56 %)
		Cytology	97 (34.65 %) Caseous material
			85 (30.25%) Blood & debris
			48 (17.14%) insufficient material
			36 (12.85%) Atypical cells
			14 (5.6 %) Malignant cells
(2)	Pathology	Tuberculosis	252 (63%)
		Reactive changes	45 (11.25%)
		chronic non specific lymphadenitis	42 (10.50 %)
		Non Hodgkin lymphoma	25 (6.25 %)
		Hodgkin's disease	22 (5.50 %)
		Metastatic carcinoma	14 (3.50 %)

DISCUSSION

Tuberculosis has become an important public health problem[3] and it is a commonest cause of an infectious disease affecting the lymphoid tissues of the body. Commonest pathology noticed in our study was tuberculosis (63%) that was supported by another study conducted at Allied Hospital Faisalabad, which reported 65% cases of tuberculosis.[4] Females were more commonly affected in our study. Dandapat also documented that commonest cause of lymphnode enlargement was tuberculosis with pre-dominance of female[5,6,7].

Highest number of patients affected were young in our references[8-9]. Tuberculous lymphadenopathy was diagnosed by clinical presentation. Related investigations like low Hb%, raised ESR[8], FNAC of the enlarged lymphnodes were the more reliable method. Acid-fast bacilli smear of the aspirate was positive in 40 patients. AFB culture +ve in 183 patients, was the most reliable method to diagnose the disease and helpful to start definitive treatment but it is a time consuming method and again, negative culture does not exclude the disease.

Histological analysis of the biopsy specimen was still required in those cases where the diagnosis remained in doubt.[9,10]. Treatment started after histological proof to avoid delay in the treatment of serious malignant disorders and to avoid unnecessary antituberculosis treatment in patients with benign reactive hyperplasia.[11]

Second common pathology noticed in our study was reactive hyperplasia. This finding was also supported by other studies.[8-9] This pathology resolved spontaneously in most of the patients as the cause was removed.[11] If reactive lymphadenopathy persist in spite of conservative period of two months, further biopsy is needed. Chronic non-specific lymphadenopathy accounted for 10.50% of cases. Generalized acute lymphadenopathy was mainly due to viral and bacterial infection.

Lymphomas are the malignant neoplasm affecting the lymphoreticular tissues of the body. About 34000 cases of lymphomas are reported each year[12]. In our study Hodgkin's lymphoma comprised of 5.50% while non Hodgkin was 6.25%. Non Hodgkin lymphoma was slightly more common than Hodgkin's disease. Malignant lymphoma was the 4th common cause of lymphadenopathy in our study in contrast to Rathi, who observed it as the second most common cause of lymphadenopathy.[13] Another study conducted showed that non-Hodgkin lymphomas are more common than Hodgkin's disease.[14] These findings are consistent with our study. Metastatic involvements are the primary cause of lymphadenopathy in western world[15] in contrast to tuberculosis. Metastatic involvement was 3.5% in our study.

REFERENCES

1 Tairq NA. Presentation of cervical lymphadenopathy to the surgeon. Pak. J. Surg. 1993;9: 120-3.

2 Swerdlow AJ, Cook KR, Skegg DC, Wilinkson J,

Cancer incidence in England and Wales, New Zealand in migrants Western to two countries Br. J cancer. 1995;72: 236-43.

3 Zeshan QM, Mehrukh M, Shahid P. Audit of lymph node biopsies in suspected cases of lymphoproliferative malignancies, implications on tissue diagnosis and patients management, J Pak Med Assoc 2000; 50: 179-82.

4 Abdullah U Cervical lymphadenopathy; Experience in Allied Hospital, J Coll Physician Surg Pak 2000; 10: 458-460.

5 Abdullah P, Mubarak A, Zaheer N: Importance of lymphnode biopsy in diagnosis of lymph adenopathy. J Coll Physician Surg Pak. 2000;10:298-301.

6 Dandapat MC, Mishra BM, Dash SP, Kar Peripheral lymph node tuberculosis, a review of 80 cases. Br. J Surg 1990; 77:911-2.

7 Ahmed. Non specific reactive hyperplasia of cervical lymph nodes a follow up. J Pak Med Assoc.1992; 4:237-8.

8 Jindal N, Devi B, Aggarwal A. Mycobacterial cervical lymphadenitis in childhood. Indian J Med Sci. 2003;75:12-5.

9 Singer C. Threat of tuberculosis, Groups at risk; WHO report of tuberculosis, epidemic, Geneva, WHO, 1996 2-23

10 Al-Mulhim AS,Al-Ghamdi AM, Al-marzooq YM The role of fine needle aspiration cytology and imprint cytology in cervical lymphadenopathy. Saudi Med J. 2004; 25:862-5.

11 Verma K, Kapila K, Aspiration cytology for diagnosis of tuberculosis. Indian J Peditar. 2002; 69:39-43

12 Handa U, Palta A, Mohan H. Fine needle aspiration diagnosis of tuberculous lymphadenitis. Trop Doct.2002; 32: 147-9

13 Mirza S, Blanca I. Restrepo. Diagnosis of tuberculous lymphadenitis using a polymerase chain reaction on peripheral blood mono nuclear cells Am J. Trop.Med. Hyg. 2003, 69 461-465

14 Weiler Z; Nelly P; Baruchin AM. Diagnosis and treatment of cervical tuberculous lymphadenitis. J Oral Maxillofac Surg. 2000, 58.477-81.

15 Engin G; Acunas B; Acunas G. Imaging of extrapulmonary tuberculosis. Radiographics. 2000, 20:2,471-88.

KNOWLEDGE, ATTITUDES AND PRACTICES REGARDING BREAST CANCER SCREENING IN WOMEN OF VARIOUS SOCIAL STRATA

ASIM JAFFARY, FARAH MANSURI, SHABNAM SHAMIN, SHAHZAD SHAMIM

ABSTRACT

Objective

To find out knowledge, attitudes and practice related to breast cancer among women.

Patients and Methods:

A convenience sample of 179 women living in Karachi age 20 years and above was studied. Proforma were filled by interviews. Questions related to breast screening knowledge, attitude and practices in different social class were asked.

Results

Out of the total of 179 female respondents, 19% (34) belonged to affluent social class, 64% (115) were of middle social class and 17% (29) were poor. There was no significant difference in the age, marital status, occupation and number of children of the respondents of the three groups. There was a significant difference in educational level in between three social groups (p<.000). Among the graduates 65% represented the middle social class and 69% of the illiterate belonged to poor class.

Only 50 % (90)of the females knew that breast cancer runs in the family, out of which 56 correct response (p<.005) were from middle class i.e. 62% and of the total, only 13 % were aware that it was linked with grand mothers history with insignificant inter group variation (p<.086). Furthermore 55% of poor women, 76.5% of middle class women and 88% of affluent class admit the importance of screening of breast cancer for its prevention (p<.000). Overall 46% were aware of mammogram, of whom 10% were poor, 48% from middle class and 73% rich (p<.019)

Conclusion:

Higher the social class better is the level of education, knowledge, attitude and practice towards the breast cancer screening.

KEY WORDS:- *Breast cancer, Screening*

INTRODUCTION

Worldwide, breast cancer is a mounting problem. England and Wales have the highest age-adjusted mortality for breast cancer (27.7 per 100,000 population). Women of South Korea ranked lowest among all nations, with an incidence of 2.6 cancers per 100,000 population[1]. There is at least a fivefold variation in the incidence of the disease reported among different countries, although this difference appears to be diminishing.

Breast cancer is the most common cancer in women. Before 1985 breast cancer was the leading cause of cancer related mortality in women after that lung surpassed it. It is still the leading cause of death from cancer among females 40-44 years of age[2]. Age-adjusted

Correspondence:
Dr. Asim Jaffary
General Surgeon
Baqai University Hospital, Karachi.

incidence of new cases has been steadily increasing since the mid-1940s. In the 1970s the probability of a woman in the United States developing breast cancer was estimated at 1 in 13; in 1980 it was 1 in 11 and in 1996 the frequency was 1 in 8[3]. Despite the steady increase in incidence, the overall breast cancer mortality has remained static. This relative decrease in mortality rate reflects the detection of an increasing percentage of early disease[4]. Survival is closely related to the stage at diagnosis. Five years survival in stage 1, 2, 3 and 4 are 84%, 71%, 48% and 18% respectively[5]. A study from department of medical oncology, Allama Iqbal Medical College, Lahore showed strong association between low socioeconomic status and advance disease, delay in diagnosis, limited access to minimal expected treatment, inferior disease free survival and overall survival[6]. Attention is focused on screening methods, which allow early detection, thus bringing forward the time of diagnosis and improving the prognosis of breast cancer. Women with minimal knowledge of breast cancer did not engage in breast cancer detection practices[7]. They need to be better informed about breast cancer and the benefits of breast cancer detection practices.

MATERIAL AND METHOD

A cross sectional survey of three communities was carried out in a KAP format. This study was conducted under Baqai Medical University and Karachi Medical & Dental College. A convenient sample of 179 women living in Karachi with age range of 20 years and older was made. An interview guide was designed specifically for this study. Questions related to breast screening knowledge, attitude and practices in different social class were asked. For data analysis SPSS was used and a p-value less than 0.05 was considered significant.

RESULTS

Out of the total of 179 female respondents, 19% (34) belonged to affluent social class, 64% (115) were of middle social class and 17% (29) were poor. The median age was 31.5 years (range was >20 and <68) and 88% of the observations gathered were of less than 50 years of age. Table I shows that there was no significant difference in the age of the respondents of the three groups (p<. 49). Forty nine percent of the responders were graduate while 20 % had primary or less than primary education with a significant difference in educational level in between three social groups (p<.000). Among the graduates 65% represent the middle social class and 69% of the illiterate belonged to poor class. Fifty six percent were married with no significant difference in marital status of the comparison groups. Forty two percent each were having no children or 1-3 children with no significant difference in the groups. Forty five percent of the responders were housewives and the occupation did not differ significantly in the 3 groups

TABLE-I DEMOGRAPHIC PROFILE OF THE RESPONDERS (N=179)

S.no	Variable	Options	Freq (%)	Poor (n=29)	Middle (n=115)	Affluent (n=34)	p-value
1.	Age	20-29	78 (43.6)	9	55	12	<. 49
		30-39	41 (22.6)	12	21	7	
		40-49	38 (21)	7	21	9	
		50-59	12 (6.8)	0	10	2	
		>60	10 (5.6)	1	8	4	
2.	Education	Illiterate	23 (12.8)	18	4	1	<. 000*
		Primary	13 (7.3)	7	6	0	
		Middle	6 (3.4)	0	4	2	
		Matric	11 (6.1)	3	8	0	
		Intermediate	38 (21.2)	1	35	2	
		Graduate	88 (49.2)	0	58	29	
3	Marital status	Married	101 (56.4	24	57	20	<. 07
		Unmarried	64(35.8)	3	48	12	
		Others	14 (7.8)	2	10	02	
4.	Occupational status	House wives	81 (45.3)	15	53	13	<. 08
		Working	77 (43)	14	43	19	
		Working off and on	21 (11.7)	0	19	2	
5.	Parity	Nil	76(42.5)	5	56	14	<. 01*
		1-3	66(38.9)	9	41	16	
		4-5	25(14)	9	12	4	
		>5	12 (6.7)	6	6	0	

Table II shows some of the indicators regarding awareness of responders on cancer of breast. It is evident that only 50 % (90)of the females knew that breast cancer runs in the family, out of which 56 correct response i.e. 62% (p<.005) was from middle class. While out of the total, only 13 % were aware that it is linked with grand mothers history with insignificant inter group variation (p<.086)

Furthermore 55% of poor women, 76.5% of middle class women and 88% of affluent class admit the importance of screening of breast cancer for its prevention (p<.000). Overall 46% were aware of mammogram, of whom 10% were poor, 48% were of middle class and 73% were rich women (p<.019)

TABLE-II COMPARISON OF AWARENESS ABOUT CARCINOMA BREAST

Questions asked	Responses	Frequency (%)	Poor (n=29)	Middle (n=115)	Affluent (n=34)	p-value
Breast Cancer runs in family (n=179)	Yes	90(50.3	9	56	25	<. 005
	No	89(49.7	20	60	9	
If yes, mention the relative commonly responsible (n=90)	Grand mother	12 (13.3)	1	9	2	<. 086
	Mother	7 (7.9)	1	3	3	
	Sister	6 (6.7)	2	2	2	
	Khala	3 (2.2)	1	1	1	
	Phupee	5 (5.6)	0	3	2	
	Cousin	2 (2.2)	1	0	1	
	Don't know	55(61.1)	3	38	14	
What mammogram is?	Yes	83 (46.4	3	55	25	<. 000
	No	96 (53.6	26	58	9	
Is it important to have breast ca screening	Yes	134(74.8	16	88	30	<. 019
	No	45 (25.2	13	27	4	

Table III portrays the attitude and practices of women regarding carcinoma breast. It is evident that 47% (p<.001) have not discussed about breast problem with anyone and only 40% discussed it with a health personnel. This included 50% of the poor, 36% of middle and 60% of the affluent (p<. 000). Moreover the BSE was performed by 7% of poor, 40% of middle and 57% of affluent group (p<.006). It was proved that only 13% consulted the doctor for screening of breast while 35% considered it unnecessary.

TABLE-III ATTITUDE AND PRACTICES

Questions asked	Responses	Frequency (%)	Poor (n=29)	Middle (n=115)	Affluent (n=34)	p-value
Discussed with anyone about breast (n=179)		94 (52.5	5	63	25	<.001
		85 (47.5	24	50	9	
If yes [illegible] discussed (n=94)		[illegible]	1	21	14	<. 000
		[illegible]	4	2	1	
		[illegible]	1	16	9	
		[illegible]	1	26	1	
do you examine your breast for [illegible] (n=179)		67 (37)	2	46	19	<.006
		112 (63)	27	69	15	
Ever consulted doctor for breast [illegible] screening(n=179)		24(13.4	0	12	12	<. 02
		155(86.6	29	103	22	
If no, then give reasons N=155	[illegible]	51(40.6)	*	7	0	<. 000
	[illegible] unnecessary	56(36)	5	42	8	
	Lack of time	29(19)	2	15	12	
	No answer	50(32)	14	34	2	

DISCUSSION

This study portrays the overall picture of urban Pakistani women's knowledge and attitudes and practices on breast cancer screening including all social strata. The study revealed that only 46% of the women were aware of breast cancer screening as also shown by Bener in his study on Arabic women[8]. In our study education, job status and opportunities for access to information are other predictors of inadequate awareness among low-income group. An other study from Pakistan[6] has the similar results that mean time elapsed before diagnosis for women from high income group was 4.3 months versus 10.6 months in low income group. This study also highlights that early breast cancer was more common in affluent strata, 70% versus 41% in the low strata. As compared to other study done on South Asian women they found that instead of age, education and ethnicity, proficiency with English language and stay in Canada were associated significantly with health practices[9]. While another study done on three age groups also found no difference in perceptions of personal risk of breast cancer among them[10]. Furthermore the attitudes towards disease prevention generally were quite positive and majority agreed upon the importance of early detection of breast cancer either by BSE or mammography. The same findings of inclination to early detection and sharing their knowledge with others was observed in an American study carried out on Asian Indian women living in rural areas of North Carolina[11]. But their results differ in the way that their women practiced mammography more often than BSE which may probably be due to financial support for screening programs as mentioned in their protocol. The results are also supported by other studies[12,13] where researchers noticed deficient knowledge and practices on breast screening.

More than half of our study population were aware of the association of family history with breast cancer and moreover only 13% responded that grand mother's disease is mostly associated with it while having significant intergroup variation. But this knowledge of positive family history is not in accordance to their practices. West and Greene also proved that neither knowledge of a positive family history nor perceived relative risk of breast cancer were associated with either increased or decreased early detection practices among low- income African American women[14].

Among all women 37% used to practice BSE but very few among low income class do it and they were the most hesitant one to discuss their breast problem with any one. These results can be compared with Han's study where 58% practice of CBE was observed[15]. While among the Japanese women, mammography practices were reported more often than monthly CBE[16]. Only 13% of our study women ever consulted a doctor for breast problem and almost one third gave no reason for this negligence, while majority found monetary constraints and lack of time as barriers to under reporting[17,18,19].

As for our population it is recommended to bring cultural change and wider understanding and motivation among family members regarding health issues. Better results can be achieved by carrying out an interventional study in the population to see effectiveness of health education programs and some incentives can be offered in order to increase compliance of the participants.

REFERENCES

1. Garfinkel L, Boring CC, Changing trends: An overview of cancer incidence and mortality. Cancer 74:222, 1993.
2. Parker SL, Tong T Cancer statistic. Cancer 1996; 46:5.
3. Parker SL, Tong T Cancer statistic. Cancer 1997; 47:14.
4. Harris JR, Lippman ME. Breast cancer. N Engl J Med 1992;325: 319.
5. www.cancerresearchuk.org
6. Aziz Z, Sana S, Akram M, Saeed A. socioeconomic status and breast cancer survival in Pakistani women. J Pak Med Assoc. 2004 54:448-53.

7. Tsark JU, Braun KL. Ten years changes in breast cancer knowledge, attitude and practices in Native Hawaiian women. Pac health Dialog, 2001 8:280-9.

8. Bener A, Alwash R, Miller CJ, Denic , Dunn EV. Knowledge, attitude and practices related to breast cancer screening: a survey of Arabic women. J Cancer Edu, 2001;16: 215-20.

9. Choudhary UK, Srivastava R, Fitch MI. Breast cancer detection practices of Eouth Asian women: knowledge, attitudes and beliefs. Oncol Nurs Forum, 1009; 25:1693-701.

10. Friedmann LC, Neff NE, Webb JA,Lathman CK. Age related differences in mammography use and in breast cancer knowledge, attitudes and behaviors. J Cancer Edu, 1998; 13: 26-30.

11. Sadler GR, Dhanjal SK, Shah NB, Shah RB, Ko C, Anghel M et al. Asian Indian women: knowledge attitude and behaviors towards breast cancer early detection. Public Health Nurs, 2001; 18: 357-63

12. Paskett ED, Tatum C, Rushing J, Michielutte R, Bell R, Foley KL et al. Racial differences in knowledge attitude and cancer screening practices among a triracial rural population. Cancer, 2004; 101: 2650-9.

13. Rutledge DN, Barsevick A, Knobf MT, Bookbinder M. Breast Cancer detection: Knowledge, attitudes and behaviors of women from Pennsylvania. Oncol Nurs Forum, 2001; 28:1032-40.

14. West DS, Greene PG, Kratt PP, Pulley L, Weiss HL, Seigfried N et al. The impact of a family history of breast cancer on screening practices and attitudes in low income rural African American women. J Women Health, 2003; 12: 779-87

15. Han Y, Williams RD, Harrison RA. Breast cancer screening knowledge, attitude and practices among Korean American women. Oncol Nurs Forum, 2000; 27: 1585-91.

16. Robins SG, Takahashi M, Ko CM, Nguyen T. Japanese American women: behaviors and attitudes towards breast cancer education and screening. Health Care Women Int, 2003; 24: 18-26.

17. Risendal B, Roe D, DeZapien J, Papenfuss M, Giuliano A. Influence of health care, cost, and culture on breast cancer screening: Issues facing urban American Indian women. Prev Med, 1999; 29: 501-9.

18. O'Conner AM, Perrault DJ. Importance of Physician's role in survey of women's breast screening practices. Can J Public Health, 1995; 86: 42-5.

19. Frieman LC, Moore A, Webb JA,Peryear LJ. Breast Cancer screening among ethnically diverse low-income women in a general hospital psychiatry clinic. Gen Hosp Psychiatry, 1999; 21: 374-81.

GASTRIC OUTLET OBSTRUCTION

MAHMOOD YOUSUF, MASOOM RAZA MIRZA, SALEEM KHAN

ABSTRACT

Objective

To highlight the fact that tuberculosis is a common cause of gastric outlet obstruction in our community.

Design *Observational study.*

Patients and Methods:

This is a three years study of patients with gastric outlet obstruction managed in the Department of Surgery at Hamdard University Hospital, Karachi.

Results *Twelve patients presented with gastric obstruction. The cause of gastric outlet obstruction was gastric carcinoma in five, tuberculosis in five, lymphoma in one and stenotic peptic ulcer disease in one patient.*

Conclusion: *Our results suggest that tuberculosis should be considered as an important cause of gastric outlet obstruction in our community, because tuberculosis is still a prevalent disease in Pakistan and other South Asian countries.*

KEY WORDS: *Gastric outlet obstruction, Tuberculosis, Carcinoma, Peptic ulcer.*

INTRODUCTION

Gastric outlet obstruction (GOO) is not an uncommon presentation in surgical practice. The patient usually presents with characteristically unpleasant vomiting. Weight loss and dehydration are usually present and there may be a long history of the underlying condition that resulted in gastric outlet obstruction[1]. Most text books and literature cite the commonest causes of GOO to be either malignant disease (usually stomach or pancreas) or peptic ulcer disease[2,3].

The causes of various symptoms and presentation vary in different communities. Local practice has to reflect local conditions and this includes the prevalence of a condition and its presentation. Recognition of a problem is a pre requisite to its solution. We have very little knowledge of the causes of GOO in our country. We therefore looked at our patients with GOO over past three years to find out different causes, modes of presentation and management.

Correspondence:
Dr. Masoom Raza Mirza
Department Of Surgery,
Hamdard University Hospital,
Taj Medical Complex,
Ma Jinnah Road,
Karachi-74400

PATIENTS AND METHODS

This study is based on twelve consecutive patients who presented with symptoms and signs of GOO to the department of surgery at Hamdard University Hospital, Karachi, from 01.01.2002 to 31.12.2004. The diagnosis of GOO was made on clinical findings of repeated vomiting, containing undigested food stuff taken several days previously. Succussion splash was considered to be a substantiating feature and the diagnosis was confirmed either by gastroscopy and/or barium meal study. All patients underwent surgical relief of obstruction. The post operative definitive diagnosis was established in all patients by histology. Surgical out come was documented. Patients who had tubercuIous obstruction were started on eradicative anti-tuberculous chemotherapy. Patients were followed up for 12 months. Demographic details were entered in Access 2000 and analyzed.

RESULTS

A total of 12 patients were included in this study; seven males and five females. The age of these patients ranged between 16 and 72 years. Variables of clinical presentation are shown in table I. Barium meal was done in 10 patients showed dilatation of stomach in all cases. Upper GI endoscopy was carried out in 11 patients and it revealed tumour in 5 patients, in one patient it was not possible to enter the duodenum. Biopsies taken at endoscopy confirmed adenocarcinoma in 5 and tuberculosis in 1 patient. Ultrasound and/or CT abdomen was performed in all patients and showed enlarged para-aortic or coeliac lymph nodes in 5 and presence of mass in stomach in 3 patients.

Four out of five patients with adenocarcinoma underwent gastrectomy, where as one underwent gastrojejunostomy. All patients with tuberculosis underwent gastrojejunostomy with lymph node biopsy. Gastrojejunostomy was also performed in two other cases, one with lymphoma and another with stenotic peptic ulcer disease.On histology, definitive diagnosis was made in all 12 patients [tuberculosis 5 (41.66%), adenocarcinoma 5 (41.66%), non-Hodgkin lymphoma 1 (8.33%) and stenotic peptic ulcer disease (8.33%)]. Comparative differences among patients with tuberculosis and carcinoma are shown in table II.

TABLE-I PRESENTING FEATURES

Clinical Features	No. of Patients
Vomiting	12(all) patients
Duration of vomiting	8 to 32 weeks (mean:14.5 weeks)
Epigastric pain	9
Weight loss	10
H/o pulmonary tuberculosis	01
Anaemia	06
Succession splash	08
Palpable mass in epigastrium	01

TABLE-II COMPARISON OF FEATURES

Variables	Tuberculosis	Adenocarcinoma
Age range: (mean)	26 - 60 years 32.8years	58 – 71 years 65 years
Duration of illness: (mean)	8 - 16 weeks 10 weeks	8 – 32 weeks 15.6 weeks
Anaemia	02	04

DISCUSSION

Our study has shown that a sizeable proportion (41.66%) of gastric outlet obstruction had tuberculous aetiology. Most of the available literature report the two most important causes of this condition to be gastric cancer and benign peptic ulcer disease and due to a decline in the incidence of peptic ulcer disease it is stressed that GOO should be considered malignant until proved otherwise [2,3].

Tuberculosis as a cause of GOO is usually mentioned as case reports and reviews[4,5]. Gastroduodenal tuberculosis constitute 2% cases of abdominal tuberculosis and as its clinical features are non specific and mimic peptic ulcer disease and gastric carcinoma, often making its diagnosis difficult even in areas where tuberculosis is endemic[4,6]. We also had five cases of adenocarcinoma and one of the peptic ulcer disease but these two combined together formed only about half of the total patients in present study.

For the treatment of obstruction secondary to benign peptic ulcer disease, recent reports suggest the use of dilatation combined with treatment of H.Pylori[5,7]. The dilatation may have to be repeated several times. In our series we used conventional method of gastrojejunostomy, combined with treatment of H.Pylori, which is a recommendation[7]. In malignant obstruction, if resection with curative intent is possible, then this is the preferred option and this was carried out in four out of five cases in our series. However, when curative resection is not possible there is current trend to use metallic expandable stents, which can be a simple and effective mean of palliation[8]. However, the lack of its easy availability and prohibitive costs are deterrents to its use in our country. In our series gastrojejunostomy was used as a mean of palliation for advanced gastric carcinoma.

In our series patients with tuberculosis as a cause of gastric outlet obstruction underwent laparotomy except one, before the diagnosis was established and the same experience is shared in other studies stating that due to its non specific mode of presentation, diagnosis is seldom suspected in the absence of pulmonary tuberculosis, often requiring laparotomy to get the diagnosis[9]. The management of these patients was also on conventional lines, with surgical relief of obstruction followed by anti tuberculous therapy. In this study mean age of patients with tuberculous gastric outlet obstruction was 32.8 years and in one of the study in a neighbour country mean age was 34.4 years which suggests that gastric outlet obstruction in younger age group should be considered as tuberculous in origin, where this disease is prevalent[9].

In tuberculous group, four out of five patients had extrinsic compression. In published work from India, same observation is mentioned. In majority of cases tuberculous

gastroduodenal obstruction was due to extrinsic compression by tuberculous lymph nodes, rather than intrinsic lesion[10]. Hence we think that in such instances in addition to luminal investigation such as endoscopy and barium meal, consideration also be given to extra luminal investigation such as a good quality ultrasound, CT and MRI, with a view to do image guided biopsies where appropriate. If such policies are adopted, we may be able to avoid laparotomy in some cases where obstruction is not complete.

However, it would be interesting to see what would be the changes in approach if pre operative diagnosis is suspected. It is now not uncommon to diagnose intestinal tuberculosis on radiological basis when there is strong clinical suspicion and with other molecular studies like PCR assay for tuberculosis[11]. If we try to intercept tuberculosis at an earlier stage, it may be possible to treat it medically in an even bigger proportion of these patients.

CONCLUSION:

Tuberculosis should be considered as an important cause of gastric outlet obstruction, wherever this disease is prevalent.

REFERENCES

1. RCG Russel, NS Williams, CJK Bulstrode. Bailey & Loves short practice of surgery, 23rd Edition, London, Arnold, 2000, 917-918.
2. Misra SP, Dwivedi M, Misra V. Malignancy is the most common cause of gastric outlet obstruction even in a developing country.Endoscopy.1998; 30:484-6.
3. Imran M, Shafi F, Chaudhry NU et.al. Gastric Outflow Obstruction predicts malignancy. Pakistan Post Grad Med J 1998; 9:155-157.
4. Moirangthem GS, Nepram SS, Bhattacharya KN et.al. Gastric outlet obstruction due to duodenal tuberculosis; a case report. Int Surg 2001; 86:132-134.
5. Ali W, Sikora SS, Banerjee D et.al. Gastroduodenal Tuberculosis. Aust NZJ Surg, 1993; 63:466-7
6. Sharma MP, Bhatia V. Abdominal tuberculosos. Indian J Med Res. 2004 305-315.
7. Boylan JJ, Gradzka MI. Long term result of endoscopic balloon dilatation for gastric outlet obstruction. Dig Dis Sci, 1999; 44:1883-6.
8. Mosler P, Mergener K, Brandabur JJ et.al. Palliation of gastric outlet obstruction and proximal small bowel obstruction with self expandable metal stent: a single center series. J Clin Gastroenterol. 2005; 39:124-128.
9. Rao YG, Pande GK, Sahni P et.al. Gastroduodenal tuberculosis management guidelines, based on a large experience and a review of the literature. Can J Surg. 2004; 47:364-8.
10. Negi SS, Sachdev AK, Chaudhary A et.al. Surgical management of obstructive gastroduodenal tuberculosis. Trop Gastroenterol. 2003; 24:39-41.
11. Ahmad M, Faroghi A, Ahmad I et.al. Intra-abdominal tuberculosis. J Surg Pakistan (international). 2002; 7:16-18.

CRYOSURGERY IN CHRONIC FISSURE-IN-ANO; A CLINICAL TRIAL

ABDUL QADEER, ABDUL KARIM SIDDIQUI

ABSTRACT

Objective

To determine the effectiveness and safety of cryosurgery as an out-patient, minimally-invasive modality of treatment for chronic fissure-in-ano.

Design *Observational study.*

Place & Duration Of Study

At Ankelseria Nursing Home, Karachi, from July 1999 to June 2003.

Patients and Methods:

Male patients of various age groups having chronic fissure-in-ano were treated. Basco and Spembly cryosurgical instruments and nitrous oxide gas were used. Probe was passed through proctoscope and applied to anal papilla, upper 1/3rd, middle 1/3rd, lower 1/3rd and skin tag in sequence for 1 1/2 to 2 minutes. Local anesthetics were used in selected cases having severe pain after the procedure.

Results: *Out of 11 cases, cryosurgery failed in 3 patients (27.27%) because they had severe pain and underwent operation within 3 days. Eight patients (72.72%) responded well to the treatment. Pain relief was 50% in 5 patients after 2 weeks; while after 4 weeks 4 had 50% relief and 7 had 75% relief. After 8 weeks all 8 were free of pain. After 8 weeks ulcer was completely healed in 6 and partially healed in 2 cases. Anal papilla was eradicated completely in 3 and partially in 2. Skin tags completely disappeared in 3 and had no effect in 2 patients. Followup for 6 months showed complete pain relief and ulcer healing in all, except 3 cases.*

Conclusion *Cryosurgery is simple, safe, minimally invasive and effective modality of treatment for chronic fissure-in-ano.*

KEY WORDS:- *Fissure-in-ano, Cryosurgery, Thermal-sphincterotomy*

INTRODUCTION

Fissure-in-ano is a common painful condition observed in anorectal practice which occurs in young, otherwise healthy people. It is either acute or chronic. It usually presents with recurrent cycle of pain, constipation, faecal trauma and spasm of sphincter[1]. Chronic anal fissure is usually associated with other pathologies like sentinel skin tag, hypertrophy of anal papilla, anal polyps and small hemorrhoids[2]. The cause of anal fissure is not clear but it is seen more commonly in cases who have constipation. It has been observed that these patients have increased activity of internal sphincter, leading to spasm and poor

Correspondence:
Dr. Abdul Qadeer
D-29, Sana Avenue
Gulistan-E-Jauhar Block 12
Karachi.

perfusion at fissure site. Major advances in our understanding of the mechanisms involved in chronic anal fissure have allowed the introduction of many new medical therapies for the condition[3]. Cryosurgery is used since long for many skin lesions successfully[4,5]; and anal lesions like hemorrhoids as well.

It is suggested that cryosurgery works by following pathophysiological changes.

a. It causes necrosis of ulcer area followed by healing and normal epithelialization.
b. It causes necrosis of superficial fibers of internal sphincter leading to partial thermal sphincterotomy.
c. Freezing causes relaxation of internal sphincter.

PATIENTS AND METHODS

From July 1999 to June 2003 in our clinic, we used cryosurgery as treatment of anal fissure to find out the efficacy and complications. Patients with painful defecation for more than two months having had medical treatment, were selected for cryosurgical treatment. Detailed history was taken including constipation, pain, itching, discharge, bleeding and swelling. Basco and Spembly cryosurgical instruments and nitrous oxide gas were used. Probe was passed through proctoscope and first it was applied to anal papilla and upper one third of ulcer, second time to middle of ulcer and third time to lower one third of ulcer and skin tag. Thus cryoprobe was applied twice or thrice as necessary, each time for 1 1/2 to 2 minutes. Local anaesthetic was used if deemed necessary. After cryosurgery patients were explained that they might have pain and watery discharge for few days. They were sent home with instructions to take analgesics and laxatives for 3 to 4 days with normal diet. They were called for followup every two weeks for 8 weeks. Relief of pain using visual analogue scale[6], ulcer healing, anal papilla and skin tag were recorded. If no relief of pain in 4 weeks found, cryosurgery was repeated and if no relief occurred after 8 weeks, operation was suggested.

Eleven patients were selected for cryosurgery from July 1999 to June 2003. Four patients had pain for 2 months, 5 had for 4 months and 2 for more than 6 months. All patients were males and the age of 8 patients was 25 to 35 years and of 3 patients, 36 to 45 years. Eleven had constipation, 9 had bleeding, one had discharge, 5 had itching and 5 had swelling. All 11 had fissure on posterior midline, 5 had enlarged and oedematous anal papilla, 2 had associated piles and 5 had sentinel skin tags. In one sitting cryoprobe was applied twice in 3 and thrice in 8 cases. In 4 cases cryosurgery was repeated after 4 weeks. Local anaesthesia was given in 6 cases because of pain

RESULTS

Out of 11 cases, cryosurgery failed in 3 patients (27.27%) because they had severe pain and underwent operation within 3 days. Eight patients (72.72%) responded well to the treatment. Pain relief was 50% in 5 patients after 2 weeks; while after 4 weeks 4 had 50% relief and 7 had 75% relief. After 8 weeks all 8 were free of pain. After 8 weeks ulcer was completely healed in 6 and partially healed in 2 cases. Anal papilla was eradicated completely in 3 and partially in 2. Skin tag completely disappeared in 3 and had no effect in 2. Followup for 6 months showed complete pain relief and ulcer healing in all except 3 cases.

DISCUSSION

Initial treatment of fissure-in-ano is conservative. Overall relief of pain and healing of ulcer occur roughly in 30-86% of cases[7] and in 20-30% cases, operation is perfiormed. Cryosurgical treatment is minimally-invasive, easy to use and effective with 73% success. Anal papilla and sentinel pile are treated at the same time. It is thus concluded that cryosurgery is simple safe and effective method of treatment for chronic fissure-in-ano. It also treats the associated pathologies at the same time, which gives good patients' satisfaction.

REFERENCES

1. Baily & Love's. Short Practice of Surgery. 1995. 22nd Ed. : 869-871.
2. Gupta PJ. Sphincterotomy with radiofrequency surgery: a new treatment technique of fissure-in-ano and associated pathologies. Rom J Gastroenterol. 2003 12:37-40
3. Garner JP, McFall M, Edwards DP. The medical and surgical management of chronic anal fissure. J R Army Med Corps. 2002; 148:230-5
4. Lundblad L, Brodin E, Lundberg JM, Anggard A. Effects of nasal capsaicin pretreatment and cryosurgery on sneezing reflexes, neurogenic plasma extravasation, sensory and sympathetic neurons. Acta Otolaryngol. 1985; 100:117-27
5. Nagasue N. Release of lysosomal enzyme beta-glucronidase after hepatic cryosurgery. Arch Surg. 1975; 110:713-6
6. Ong K.S and Seymour R.A. Pain measurement in humans. Surg J R Coll Surg Edinb Irel. 20042: ;15-27
7. Scholefield JH, Bock JU, Maria B, Richter HJ, Athanasiadis S, Prols M, Herold A. A dose finding study with 0.1%, 0.2% and 0.4% glyceryl trinitrate ointment in patients with chronic anal fissures. Gut. 2003; 52:264-9

NEONATAL INTUSSUSCEPTION: A RARE ENTITY

ANWAR ARAIN, SYED RAEES TAQVI, TAYYABA BATOOL, M. ALI, NAIMA ZAMIR, TARIQ HUSSAIN, JAMSHED AKHTAR, FARHAT MIRZA

ABSTRACT

Intussusception is a common cause of intestinal obstruction in infancy. It has been reported in pre-matures and during fetal life as well. In full term neonates it is a rare entity. In this case report we describe our experience of management of a six days old male baby. Who turned out to be a case of idiopathic ileoileal intussusception. As the gut was non viable, resection and anastomosis were performed. Post operative recovery were uneventful.

KEY WORDS:- *Intussusception, Neonate, Intestinal obstruction*

INTRODUCTION

The reported incidence of intussusception in neonates ranges between 0.3% - 1.3% in various studies[1]. Till 2003 only 35 cases of intussusception were reported in prematures. It occurs more often in full terms than prematures[2]. More than 50% patients of Patriquin et al had lead point in full term neonate[3]. In this report we describe a neonate with idiopathic variety of ileo-ileal intussusception.

CASE REPORT

Our patient was a full term male baby born at a private hospital. There was delayed cry followed by respiratory distress. Following resuscitation baby was referred to another facility for incubator care and possible ventilatory support. Baby remained admitted to that facility and finally referred to us with complaints of bilious vomiting and non passage of meconium, at the age of six days. On examination patient was lethargic with abdominal fullness. No mass was palpable. Per rectal examination was unremarkable. X-ray abdomen was suggestive of intestinal obstruction. We made a provisional diagnosis of intestinal obstruction due to bands or malrotation. . Following fluids and electrolyte correction baby was operated upon. At laparotomy dilated loops of jejunum and proximal ileum were found. A mass was felt that turned out to be ileo-ileal intussusception (Fig. I). An attempt was made at reduction, which was difficult. Following reduction patches of necrosis found on the gut with gangrenous point of constriction ring. (Fig.II). Resection and anastomosis was performed. No lead point

Fig I Ileo-ileal intussusception

Fig II Note gangrenous patches over gut following reduction of intussusception

Correspondence:
Dr. Anwar Arain
Surgical Unit B,
National Institute of Child Health,
Karachi. 75510

found on cut section of specimen. Post operative recovery was uneventful and baby was discharged in a week time in good condition.

DISCUSSION

Intussusception in the first month of life is rare; however, it should be considered a distinct clinical and pathologic entity in patients with intestinal obstruction in this age group. Ueki from Japan reported fourteen neonates between June 1974 and January 2001 with intussusception. Patients were divided into two groups according to whether or not, signs were present on the first day of life or not. All six patients in the group whose signs were present on the first day of life also had intestinal atresia or malrotation. Among patients whose signs began less than 24 hours after birth, five of eight patients suffered hypoxia. They believe that hypoxic events may play a crucial aetiologic role in the pathogenesis of late-onset neonatal intussusception[4]. Our patient also had hypoxic insult at birth. How it leads to intussusception is the point to ponder.

Intussusception in its usual presentation in infancy, is mostly idiopathic in nature. Beyond classical age group, it is mostly secondary to some pathology[5]. Usually neonatal intussusception is secondary in nature but our patient did not have any lead point. He did not show signs of intestinal obstruction on initial days. Ultrasound and contrast enema have been used as diagnostic and therapeutic modalities[6-7]. We did not have intussusception as differential diagnosis and as patient was having intestinal obstruction laparotomy was performed. The surgical procedure in our patient was an easy task and so was the post operative outcome. Learning from this experience we suggest that intussusception should be included in differential diagnosis on intestinal obstruction even in neonates.

REFERENCES

1. Avansino JR, Bjerke S, Hendrickson M, Stelzner M, Sawin R. Clinical features and treatment outcome of intussusception in premature neonates. J Pediatr Surg 2003 38;1818-21.
2. Al-Arfaj AA, Mitra DK, Moghazy KM, Moghazy BH. Neonatal Intussusception in the premature. Saudi Med J 2004; ;25:2020-1.
3. Patriquin HB, Afshani E, Effman E, Griscom NT, Johnson F, Kramer SS, Rapp K, Reilly BJ: Neonatal intussusception. Report of 12 cases. Radiology 1977 125 463-66.
4. Ueki I, Nakashima E, Kumagai M, Tananari Y, Kimura A, Fukuda S, Hashimoto T. Intussusception in neonates: analysis of 14 Japanese patients. J Pediatr Child Health. 2004 ;40:388-91.
5. Wang NL, Yeh ML, Chang PY, Sheu JC, Chen CC, Lee HC, Hung HY, Hsu CH: Prenatal and neonatal intussusception. Pediatr Surg Int 1998; 13: 232-236.
6. Chen Y, Ni YH, Chen CC. Neonatal intussusception due to a cecal duplication cyst. J Formos Med Assoc. 2000;99:352-3.
7. Martinez Biarge M, Garcia-Alix A, Luisa del Hoyo M, Alarcon A, Saenz de Pipaon M, Hernandez F, Perez J, Quero J. Intussusception in a preterm neonate; a very rare, major intestinal problem--systematic review of cases. J Perinat Med. 2004; 32:190-4.

CONTENT INDEX 2005

VOL. 10 NO. 1 (JANUARY – MARCH 2005)

EDITORIAL

SURGEONS EVALUATION AND COMPETENCE
Irshad Waheed 1

ORIGINAL ARTICLES

ROLE OF PERITONEUM AS INTERPOSITION TISSUE IN THE MANAGEMENT OF VESICO VAGINAL FISTULA
Asif Abbas Khawaja, Riaz Ahmed and Rafique Anjum. 2

ESTIMATION OF GESTATIONAL AGE OF THE FETUS BY MEASURING PLACENTAL THICKNESS
Muhammad Hanif Khatri, Abdul Ghaffar and Rashid Mahmood. 5

ANTIBIOTIC SENSITIVITY PATTERN IN BURN WOUND CULTURES
Tayyaba Batool, Jamshed Akhtar, Soofia Ahmed, Farhat Mirza, Shazia Jalil, Aqil Soomro, Nasir Saleem, Yaqoot Jehan, M.Ali Shaikh and Raees Taqvi. 8

SAGITTAL DISCREPANCY IN CENTRIC RELATION AND CENTRIC OCCLUSION POSITIONS IN PRETREATMENT ORTHODONTIC PATIENTS
Ambreen Afzal, Afreen Shameem and S.A Rauf Shah 12

CAUSES OF INTESTINAL OBSTRUCTION: A STUDY OF 257 PATIENTS
Zahid Mehmood, Adnan Aziz, Mazhar Iqbal, Irfan Sattar and Asadullah Khan. 17

RUPTURE OF GRAVID UTERUS
Jahan Ara Hasan, Mabel Aaki and Naseem Kareem. 20

TUBERCULOSIS OF BREAST
G M Khan Baloch and Fakhra Anwar. 23

CARCINOMA OF RECTUM
Kheo Ram Dholia, Khalid Ahsan Malik, Atta Hussain Soomro and Sikandar Ali Shaikh 26

COMPARISON OF PREOPERATIVE ULTRASONOGRAPHIC FINDINGS WITH OPERATIVE FINDINGS IN HEPATOBILIARY SURGERY
Sajida Qureshi, Naheed Sultan and Rabia Urooj. 29

EVALUATION OF THE PREDISPOSING FACTORS AND CAUSATIVE ORGANISMS OF CHRONIC OSTEOMYELITIS
Shahzada Ahmed Ali, Nadeem Ahmed Shaikh and Awais Ahmed Shaikh. 32

LAPAROSCOPIC DRAINAGE OF RUPTURED LIVER ABSCESS
G. Asghar Channa AND Azmat Siddiqui. 36

CASE REPORTS

THYMOLIPOMA IN A CHILD
Farhat Mirza, Jamshed Akhtar, Naima Rasool, Nasir Saleem, Yaqoot Jehan, Tayyaba Batool, M. Ali Shaikh, Raees Taqvi and Naima Zameer 39

NON HEALING GENITAL ULCER IN A YOUNG WOMAN
Arfan ul Bari AND Shahid Majeed 41

VOL. 10 NO. 2 (APRIL – JUNE 2005)

EDITORIAL

KEEPING PACE WITH MEDICAL INNOVATIONS
Sur. Barkat Ali Charania 1

ORIGINAL ARTICLES

OUTCOME OF STRANGULATED INGUINAL HERNIA
Muhammad Hasan Abbas 2

LICHTENSTEIN REPAIR VERSUS DARNING REPAIR IN DIRECT INGUINAL HERNIA
Ashfaq Ahmed Javed, Raees Ahmed, Aurangzeb 7

PROGNOSTIC FACTORS IN ACUTE MESENTERIC ISCHEMIA
Syed Asim Ali Jaffary 11

COMPARATIVE STUDY OF LATERAL INTERNAL SPHINCTEROTOMY WITH ANAL DILATATION FOR THE TREATMENT OF CHRONIC ANAL FISSURES
Tariq GR , Bangash KA 15

PILONIDAL SINUS EXCISION, PRIMARY LATERAL CLOSURE WITH WOUND DRAINAGE
Farzana Memon, Naushad Baig, Shahida Parveen 18

ANALYSIS OF CLINICAL PROFILE OF CHILDREN WITH CONGENITAL ADRENAL HYPERPLASIA
Jamal Raza, Muhammed Alam 21

TRANSURETHRAL INCISION OF PROSTATE AS TREATMENT OF BENIGN PROSTATIC HYPERTROPHY
Anees Hussain Jaffery, Shahid Shamim M, Saeed N 24

CORONARY ARTERY BY PASS GRAFTING IN PATIENTS WITH RENAL DYSFUNCTION
Arif-ur-Rehman Khan, Suhaib Khushak, Tariq Azam Siddiqui, Zahid Ullah Khan, Nadeem Ahmed, Muhammad Musharaf 28

AN EXPERIENCE OF LAPAROSCOPIC CHOLECYSTECTOMY
Sher Mohammad Shaikh, Thakur das, Sikader ali mughul 31

MEDICAL EDUCATION

ANESTHESIA CRISIS RESOURCE MANAGEMENT SPECIAL TOPIC
Saleem Ahmed, Ashfaq Ahmed Javed, Jamshed Ahmed Rehmani, Ehsan Zafar, Aurangzeb 34

INITIAL MANAGEMENT OF INJURED PATIENT : A RECALL
Hassan Mahmood Tabassum 38

SHORT ARTICLE

AN EIGHT YEARS AUDIT OF LAPAROSCOPIC CHOLECYSTECTOMY
Mohammad Aslam Baloch, Qurban Bhugti, Zain-ul-abidin, Faiz Tareen, Mohammad Younas Mengal, Rashid Qudoos 41

CASE REPORTS

PEUTZ JEGHER'S SYNDROME AND INTUSSUSCEPTION
Jamshed Akhtar, Naima Rasool, Yaqoot Jehan, Tayyaba Batool, M. Ali Shaikh, M. Raees Taqvi, Nasir Saleem, Naima Zameer, Farhat Mirza 43

HYDATID CYST OF BREAST
Naushad Baig, Farzana Memon 46

VOL. 10 NO. 3 (JULY – SEPTEMBER 2005)

EDITORIAL
CONTINUING MEDICAL EDUCATION (C.M.E)
Irshad Waheed 1

ORIGINAL ARTICLES

OUTCOME OF LEVONORGESTREL RELEASING INTRAUTERINE SYSTEM IN THE TREATMENT OF IDIOPATHIC MENORRHAGIA
Mammona Mushtaq, Khadija Ashraf 2

VARIATION IN THE CENTRIC SLIDE ACCORDING TO THE FACIAL FORMS
Ambreen Afzal, Irfan Qamar-Ud-Din, S.A Rouf Shah 6

COMPARATIVE STUDY OF DIFFERENT DRUG TREATMENT PROTOCOLS IN PATIENTS WITH PERITONITIS
Tayyaba Batool, Jamshed Akhtar, Soofia Ahmed, Atif Saeed, Shazia Jalil, Aqil Soomro 11

URINARY TRACT INJURIES DURING GYNECOLOGICAL AND OBSTETRIC PRACTICE
Pushpa Sirichand, Razia Mustafa Abbassi, Chandra Mandho Das, Nasreen Jatoi 14

A COMPARATIVE ANALYSIS OF PERFORMING TONSILLECTOMY BY DIATHERMY VERSUS DISSECTION METHOD
Syed Mosaddaque Iqbal, Ahsan Khan 17

OBSTETRICAL HYSTERECTOMY
Sohail Mahmood Ch, Aqueela Ayaz, 20

ASSESSMENT OF THE COMPLICATIONS OF TOTAL THYROIDECTOMY
Syed Sagheer Hussain Shah, Asadullah Khan 24

EMERGENCY CESAREAN HYSTERECTOMY
Shakira Perveen 27

ASSOCIATION OF MATERNAL GLYCEMIA WITH NEONATAL COMPLICATIONS
Muhammad Alam, ASM Akhtar *, Syed Jamal Raza 31

SCREENING FOR ASYMPTOMATIC BACTEURIA IN PREGNANCY
Tazeen Fatima Munim, Shaista Rashid 34

COMMENTRY
ACUTE COMPARTMENT SYNDROME
Fayyaz Ahmad Orfi, Intisar ul Haq 38

CASE REPORT
CONGENITAL MEGALOURETHRA
Sikandar Ali Mughal, Sirajuddin Soomro 41

LETTER TO THE EDITOR
CIRCUMCISION WITH PLASTIBELL DEVICE: A WORD OF CAUTION
Jamshed Akhtar 44

VOL. 10 NO. 4 (OCTOBER – DECEMBER 2005)

EDITORIAL
NATURAL DISASTER MANAGEMENT PLAN: FUTURE DIRECTIONS
Jamshed Akhtar 1

ORIGINAL ARTICLES

THE MANAGEMENT OF MYOPIC MACULAR HOLE WITHOUT RETINAL DETACHMENT
Abdul Rasheed Khokhar 2

TWO STAGE MANAGEMENT OF PATIENTS WITH HIRSCHSPRUNG'S DISEASE
Kifayat Khan 7

MANAGEMENT OF PREGNANCY WITH OVARIAN TUMOUR
Ghufrana Umer Memon, Jahan Ara Ainuddin 11

PRESENTATION, MANAGEMENT AND OUTCOME OF MASTALGIA
Asma Muhammad Hanif, Shahid Rasool, Muhammad Tariq Abdullah, Asadullah Khan 15

NEONATAL SEPSIS IN NICU: BACTERIAL ISOLATES AND THEIR SENSITIVITY PATTERN
Rehana Akhtar, *Aslam Haider, *M. Rafie Raza. 18

RISK FACTORS FOR TUBAL ECTOPIC PREGNANCY
Rumina Tabassum, Muhammad Ammad saeed, Mariam Ahmed, Sajeela Naureen, Nusrat H Khan 22

FREQUENCY OF CARCINOMA IN SPECIMENS OF CLINICALLY BENIGN ENLARGED PROSTATE
Waseem Yar Khan, Mian Iftikhar ul Haq, Abdus Samad Khan, Mazhar Khan, Usman Ali. 26

ABDOMINAL WOUND DEHISCENCE: FREQUENCY AND RISK FACTORS
Muhammad Saleem Shaikh 30

VAGINAL BIRTH AFTER CAESAREAN SECTION
Ghufrana Umer Memon, Ghazala Ahmed Azam 34

COMPARISON OF COMPLICATIONS BETWEEN MAYO'S REPAIR AND MESH REPAIR (PRE-PERITONEAL APPROACH) FOR PARA-UMBILICAL HERNIA
Nur Saeed, Muhammad Sohail Khan, Shahab A. Syed. 38

PRESENTATION OF ENLARGED LYMPH NODES
Shahida Parveen Afridi, M. A. Naushad Beg, Farzana Memon 41

SURVEY REPORT
KNOWLEDGE, ATTITUDES AND PRACTICES REGARDING BREAST CANCER SCREENING IN WOMEN OF VARIOUS SOCIAL STRATA
Asim Jaffary, Farah Mansuri, Shabnam Shamin, Shahzad Shamim 44

EVIDENCE BASED REPORT
GASTRIC OUTLET OBSTRUCTION
Mahmood Yousuf, Masoom Raza Mirza, Saleem Khan 48

CRYOSURGERY IN CHRONIC FISSURE-IN-ANO; A CLINICAL TRIAL
Abdul Qadeer, Abdul Karim Siddiqui 51

CASE REPORT
NEONATAL INTUSSUSCEPTION: A RARE ENTITY
Anwar Arain, Syed Raees Taqvi, Tayyaba Batool, M. Ali, Naima Zamir, Tariq Hussain, Jamshed Akhtar, Farhat Mirza 53