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EDITORIAL:

SCIENTIFIC WRITING

Dear readers you are holding 11.2 issue of Journal of Surgery (JSP) Pakistan. You must have appreciated its new look. We take opportunity of this editorial to brief our readers about writing an article for a scientific journal. It has been observed that authors are not reading the instructions before submitting the manuscript. This results in rejection of large number of articles at initial assessment. The second observation is submission of duplicate studies. It should be remembered that simple documentations of facts already known does not merit publication as original article. This waste of resources should be discouraged. Third observation is insistence by authors to publish their articles as original articles because only then it will get accreditation by Pakistan Medical and Dental Council. This clearly indicates that such authors are not research oriented but just want publication against their name to get promotion. This attitude has lead to deterioration of education system at medical colleges because wrong people are placed at posts that they never deserved.

JSP follows uniform requirements for manuscript submission to biomedical journals. These have been up dated in February 2006. The authors who wish to submit their manuscript as original article should follow these guidelines. The authorship would be given to only those who have contributed to the preparation of manuscript. Gift authorship will be discouraged and editorial board itself will act in this regard. All segments of an original article with structured abstract of about 250 words and references written in Vancouver style should be ensured. Manuscript not fulfilling these guidelines will be rejected instantaneously. Further processing will be according to subject reviewers comments. We will publish a check list in every issue to facilitate authors in preparing and submitting the manuscript in future.

JSP also encourage readers to contribute in variety of ways. It can be in the form of Viewpoint, Debate, Ethical issues, Evidence based reports, Clinical practice articles, Brief report, Contemporary issues, Letter to the editor etc. It will help in developing broader thinking related to medical field and thus more comprehensive views will come on paper, which thus would help in dealing with various issues related to health and its delivery system.

We look forward to contribution in the light of guidelines mentioned above, in future.

DR. JAMSHED AKHTAR
Editor

EARLY OUTCOME OF TRANSVESICAL POSTATECTOMY FOR LARGE PROSTATIC ADENOMA

MIAN IFTIKHAR UL HAQ, ABDUS SAMAD KHAN, WASEEM YAR KHAN, ASGHAR ALI

ABSTRACT

Objective *To determine the immediate postoperative course and complications following transvesical prostatectomy for large prostatic adenoma.*

Design *Descriptive Study*

Place and Duration of Study: *This study was carried out in surgical A ward Lady Reading Hospital Peshawar, from 1st February 2004 to 31st July 2005.*

Patient and Methods *All patients who presented with bladder outflow obstruction and fulfilled the inclusion and exclusion criteria were included in the study. After taking an informed consent history, clinically examination and related investigations were carried out. All these patients underwent prostatectomy by transvesical approach followed up for six months.*

Results *The total number of patients was 173. The mean age of patients was 63.42 years and most of the patients (n 104- 60%) presenting with benign prostatic enlargement were in the age range of 56-60 years. The common presenting complaints were prostatism (57.80%) and acute retention (34.68%). All patients underwent prostatectomy by transvesical approach. The postoperative complications were recorded in 23 (13.29%) patients. Some patients had more than one complication. These were urinary tract infection in 9 (5.20%), clot retention in 5 (2.89%), transient urinary incontinence in 3 (1.73%), urethral stricture in 3 (1.73%) and wound infection in 2 (1.16%) patients. One (0.58%) patient died due to myocardial infarction.*

Conclusion: *Transvesical prostatectomy having a low incidence of complications, requiring no special equipment, is a good procedure for large prostatic adenomas.*

KEY WORDS:- *Early outcome, Transvesical prostatectomy, Prostatic adenomas.*

INTRODUCTION:

The prostate is present in all mammals but only man and dog develop pathological changes. Why this should occur is not clear. The prostate grows in a linear fashion up to 20 years of age, stabilizes and then resumes growth at the age of 50 years onwards, making benign prostatic enlargement the most common condition in men in older age group.[1] Epidemiological studies show that 80% of the patients over 80 years of age present with anatomical benign prostatic enlargement and there is 51% clinical incidence of benign prostatic enlargement in men between 60-69 years of age. The histological evidence of benign prostatic enlargement in the same age group is about 70%.[2] All men having functional testis will develop

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benign prostatic enlargement if they live long enough. It is the squale of benign prostatic enlargement (retention, lower urinary tract symptoms, urinary tract infections and obstructive uropathy) that dictates whether or not treatment is necessary. The clinical presentation is usually nocturia associated with hesitancy and or urgency, decrease in size and force of urinary stream, intermittent, terminal dribbling or acute urinary retention. Sometime patients present with complications like haematuria, recurrent UTI, calculi and obstructive uropathy.[3]

The diagnosis is made on detailed history, digital rectal examination (DRE) and ultrasound. Rarely is the diagnosis not straight forward, and more investigations are required.[4] The treatment options are operative and non operative. The non-operative modalities include watchful waiting, alpha blocker, 5-alpha-reductase inhibitors and phytotherapy.[5] It is estimated that in the US alone more than $4 billion is spent on the medical management of benign prostatic enlargement. The best option is surgical treatment which includes transurethral resection of prostate (TURP), transvesical prostatectomy (TVP), retro pubic prostatectomy, transurethral vaporization of prostate (TUVP), transurethral incision of prostate (TUIP), transurethral needle ablation (TUNA), high intensity focused ultrasound (HIFU), laser ablation, balloon dilatation and urethral stent. In UK approximately 40,000 prostatectomies are performed annually. In US $2 billion is spent on surgical treatment while in UK, the management of benign prostatic enlargement consumes 0.4% of National Health Service expenditure.[6]

Although TURP is the gold standard at the moment and commonly done by urologist in specialized units, but TVP is still commonly performed for large prostatic gland and associated complications like vesical calculus and diverticulum[7].

PATIENTS AND METHODS:

This was a descriptive study of patients who underwent trasvesical prostatectomy from 1st February 2004 to 31st July 2005, in Surgical A ward Lady Reading Hospital 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 as mild, moderate and severe IPSS. The detail of IPSS chart is shown in table -I.

The patients admitted through surgical outpatient department with symptoms of bladder outflow obstruction were interviewed and their symptoms evaluated on IPSS chart. Patients with severe IPSS underwent digital rectal examination and those with convincingly enlarged but

TABLE-I INTERNATIONAL PROSTATE SYMPTOMS SCORING CHART

S.No	Symptoms	Not at all	Less than 1 time 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 that stopped 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 went to bed at night until the time you got up in the morning?	0 time	1 time	2 time	3 time	4 time	5 time

Total Symptoms Score = Sum Of Questions 1-7 =

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

benign looking prostate and on ultrasound the prostate weight more than 85 gm and post voiding urine volume above 100 ml, were included in this study. While patients having stony hard prostate on DRE, bladder growth and urethral stricture were excluded from this study. After taking an informed consent all the information of patients regarding demographic details, history of presenting complaints according to IPSS charts, general physical examination, systemic examination, and findings of digital rectal examination regarding size, surface and consistency of prostate gland were taken and recorded on a special designed proforma for this study.

The investigations done in every patient were blood complete examination, urine analysis, blood urea and sugar, x-ray chest, ECG, plain x-ray abdomen (KUB) and ultrasound abdomen and pelvis. Urine culture and sensitivity were done whenever necessary and antibiotics given accordingly. Urodynamic studies were not done due

to lack of facilities. In all patients urethroscopic examination was done before surgical intervention.

All patients underwent TVP. In these patients transverse suprapubic incision was made. After enucleation of the prostate, three-way haematuria catheter was passed transurethrally and primary closure of the bladder was done. Extravesical drain was kept in all patients and irrigation of bladder with 0.9% NaCl solution through transurethral catheter maintained. Patients were examined in the morning and evening rounds regularly to note the progress. The extravesical drain was removed usually on 2nd postoperative day and three-way haematuria catheter on 5th postoperative day. Patients were then discharged after passing urine themselves and followed for postoperative complications up to six months.

RESULTS:

One hundred and seventy-three patients of benign prostatic enlargement (BPE) underwent TVP. Majority of the patients were in the range of 56 to 60 years .Mean age was 63.42 years. Detailed description is given in table -II. All the patients presented with lower urinary tract symptoms (LUTS) and majority (57.80%) of them presented with prostatism symptoms. Sixty patients had acute retention. .

Out of 176 patients a total of 23 (13.29%) developed postoperative complications. The common postoperative complications were urinary tract infection 9 (5.20%) and clot retention 5 (2.89%) table-II. After six months IPSS decreased from severe (20-35) to mild (1-7) and the quality of life score decreased from 5.2 +_ 0.7 to 0.9 +_ 0.5.

TABLE -II POST OPERATIVE COMPLICATIONS

S.No	Postoperative Complications	Number Of Patients	Percentage %
1	Urinary tract infection	9	5.20
2	Clot retention	5	2.89
3	Transient incontinence	3	1.73
4	Urethral stricture	3	1.73
5	Wound infection	2	1.16
6	Mortality	1	0.58
	Total	23	13.29

DISCUSSION:

There is little debate that as men grow older their prostate gland increase in size. Furthermore, as the number of elderly men in our population increases (due to better health care) there will be a greater number of patients that ultimately will require treatment for BPE. The patients with lower urinary tract symptoms generally seek help for relief of their symptoms and the treatment is best decided by considering the impact of the disease on quality of life. Is this impact mild, moderate or severe? It is this parameter alone that drives the decision making process for patients. Prostatectomy has represented the only acceptable therapeutic alternative for BPE[2, 6].

Although TURP is the gold standard at the moment and the durability and success from surgery is clear, with 80-90 % symptomatic improvement. But no other treatment, with the exception of open prostatectomy has been shown to be as effective[8]. TVP is still commonly performed procedure to deal with large glands and associated complications like vesical calculus and diverticulum. Moreover TVP is a one stage procedure which is easy and safely performed.[9]

In our series the mean age of the patients was 63.42 years. The mean age reported in the literature varies from 62 – 68.5 years.[10-14] The variations in the average age are most probably due to the fact that most of our elderly people do not have a correct record of their date of birth and use rough estimates.

Majority of the patients (57.80%) with BPE in our study presented with symptoms of prostatism. Khan WY et al reported prostatism (57.94%), acute retention (34.58%), retention with overflow incontinence (4.67%), haematuria (1.87%) and incontinence (0.93%)[15]. Obstructive symptoms like retention, hesitancy and poor stream were higher in patients of > 60 years age, while irritative symptoms like day and night frequency and urgency were noted in patients of < 60 years age. This finding of somewhat higher incidence of irritative symptoms in < 60 years age patients needs further evaluation on the line of detrusor instability, size of prostate and the nature of hyperplasia.

The post operative symptoms gradually improved from 1st day, after removal of catheter, to 6th month. Marked improvement was noticed in 159 patients while mild to moderate improvement in 14 patients. The obstructive symptoms relief was excellent while some of the irritative symptoms persisted in few patients. Detrusor instability has been described as a possible explanation for irritative symptoms like frequency, urgency and urge incontinence. It has been stated that detrusor instability disappears only in on half to two third of the patients postoperatively[16]. So detrusor instability, postoperative infection
and the process of aging itself may contribute to the persistence of symptoms and prolonged hospital stay in some patients. In our study the urinary voiding complications of prostatectomy were recorded while the sexual complication not obtained.
Twenty-three (13.29%) out of 173 patients developed postoperative complications. Some patients had more than one complication. The frequency of urinary tract infection was in 9 (5.20%) patients in our study. All of

these patients were catheterized preoperatively. Khan M[17] has reported 4.4%, which correlates to our study. Ali MN [12] has reported 11.5% and Tubaro A et al[18] 12.5%. These gross variations may be due to the difference in sterilization technique of surgical instruments, catheter care and use of antibiotics.

Clot retention occurred in five patients (2.89%). It correlates to that (1.5%) described by Memon AS[10]. Ahmad M [11] has reported 4.8 %. Transient urinary incontinence occurred in three patients (1.73%). They were given pelvic floor exercises and became continent in next two months time. Tan LB[19] and Luttwak Z[20] have reported 1.92% and 2.0% respectively. Khan M[17] has reported 3.1%. Wound infection occurred in two patients (1.16%) that were then managed with daily dressing and antibiotics according to culture and sensitivity. Luttwak Z[20] has reported 3% and Tubaro A[18] 3.2%.Ahmed M[11] has reported 4.2% and Khan M[17] 5.8%. Memon AS[10] has reported 10 %. These variations in different centers may be due to difference in nursing care, catheter care and use of antibiotics prophylactically and postoperatively. We noticed urethral stricture in three patients (1.73%). Ahmad M[11] has also reported the same percentage of 2.1 %. Luttwak Z[20] has reported 3%. One patient (0.58%) died due to myocardial infarction. Khan M[17] has reported 0.6% and Tan LB[19] 0.27%.

The post operative symptoms gradually improved from 1st day, after removal of catheter, to 6th month. After six months IPSS decreased from severe (20-35) to mild (1-7) and the quality of life score decreased from 5.2 +_ 0.7 to 0.9 +_ 0.5.

CONCLUSION:

Transvesical prostatectomy having a low incidence of complications, requiring no special equipment, is a good procedure for large prostatic adenomas.

REFERENCES:

1. Birch B, Ratan P. Management of benign prostatic hyperplasia. In: Taylor I, Johnson CD editors. Recent Advances in Surgery. UK: Royal Society of Medicine Press, 24th ed. 2001: 159-70.
2. Nawaz A, Alam MH, Hussain S. Evaluation of American Urologist Association prostate symptom score and urodynamic studies as a tool for pre operative assessment and monitoring of operative outcome in patients with benign prostatic hyperplasia, undergoing transurethral resection of prostate. J Coll Physicians Surg Pakistan 2000; 10: 387-91.
3. Eckhardt MD, Van Venrooij GE, Van Melick HH, Boon TA. Prevalence and bothersome of lower urinary tract symptoms in benign prostatic hyperplasia and their impact on well being. J Urol 2001; 166: 563-8.
4. Ali MN. Giant prostate: a diagnostic problem. J Pak Med Assoc 1996; 10: 101-4.
5. Gee WF, Holtgrew HL, Blute ML. American Urological Association Gallop survy: changes in the diagnosis and management of prostate cancer and benign prostatic hyperplasia, and other practice trends from 1994 to 1997. J Urol 1998; 160: 1804-7.
6. Jespen JV, Bruskewitz RC. Office evaluation of men with lower urinary tract symptoms. Urol Clin North Am 1998; 25: 545-54.
7. Neal DE, Kelly JD. The Prostate and seminal vesicles. In: Russell RCG, Williams NS, Bulstrode CJK editors .Bailey and love·s short practice of surgery. 23rd ed. London: Arnold, 2004:1370-87.
8. Fitzpatrick JM. A critical evaluation of technological innovations in the treatment of symptomatic benign prostatic hyperplasia. Br J Urol 1998; 18: 56-63.
9. Dalela D, Singh KM, Agarwal R and Chandra H. Transurethral circum-apical incision of the prostate: minimizing sphincteric injury during transvesical prostatectomy for large prostates. Br J Urol 2000; 85:966-8.
10. Memon AS. Transvesical prostatectomy for benign prostatic hyperplasia: an experience of 200 cases at Hyderabad. J Coll Physicians Surg Pakistan 1993; 3:119-22.
11. Ahmad M. Retropubic prostatectomy for benign prostatic hyperplasia: an analysis of 140 cases. J Coll Physicians Surg Pakistan 2001; 11: 389-91.
12. Ali MN.The outcome of transurethral resection of prostate. J Coll Physicians Surg Pakistan 2001;11:743-5.
13. Mebust WK, Holtgrew HL, Cocket ATK, Peters PC. Transurethral prostatectomy: immediate and late postoperative complications. A cooperative study of 13 participating institutions evaluating 3885 patients. J Urol 1989; 141: 243-7.
14. Jiy Y, Weizhon Y, Huan M. Suprapubic transvesical prostatectomy with out partition of the prostatic cavity. Chin Med J 2001; 114: 1-10.
15. Khan YR, Ulhaq MI, Khan AS, Khan M, Ali U. Frequency of carcinoma in specimens of clinically

benign enlarged prostate. J Surg Pak 2005; 10: 26-9.

16. Abrams PH. Detrusor instability and bladder outlet obstruction. Neuro Urol Urodynamics 1985; 4: 317-28.

17. Khan M, Khan S, Nawaz H, Pervez A. Transvesical Prostatectomy still a good option.JCPSP 2002;12:212-5.

18. Tubaro A, Carter S, Hind A, Vicentini C, Mianol L. A prospective study of the safety and efficacy of suprpubic transvesical prostatectomy in patients with benign prostatic hyperplasia. J Urol 2001; 166:172-6.

19. Tan LB,Chiang CP,Huang CH,Chou YH,Wang CJ.Transvesical prostatectomy for benign prostatic hyperplasia-364 cases.Gaoxiong Yi Xue Ke Xue Za Zhi 1991;7:599-603.

20. Luttwak Z, Lask D, Abarbanel J, Manes A, Paz A, Mukamel E. Transvesical prostatectomy in elderly patients.J Urol 1997;157:2210-11.

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EARLY SURGICAL MANAGEMENT OF APPENDICULAR MASS

MUHAMMAD HALEEM TAJ, SHOAIB AHMAD QURESHI

ABSTRACT

Objective *To determine the results of early surgical management of appendicular lump.*

Design *Quasi experimental.*

Place and Duration of Study: *Bolan Medical Complex Hospital Quetta, from January 2002 to January 2005.*

Patient and Methods *Eighty patients of appendicular mass were operated for early surgical management. All the patients operated. The choice of incision depended upon the operating surgeon. Pus collected was measured and send for culture and sensitivity. Duration of operation was measured. Primary wound closure was the aim. Complications noted and ward stay was noted for every case.*

Results *Out of four hundred patients of acute appendicitis, eighty patients were having appendicular mass. There were 56 males and 24 females patients between 14 to 60 years of age. Male to female ratio was 2.33:1. Gridiron incision made in 68.75 %, Rutherford Morrison incision in 18.75%, right lower Para median incision and lower midline incision made in 25% of the patients. Pus collection was found amounting between 20-60 ml. Lump was dissected with extra care. Operation time was between 50-100 minutes. Primary closure of the wound was done in all patients. Wound infection occurred in 18.75% of the patients. Most of the patients (82.5%) stayed for 4-7 days postoperatively, 11.25% patients stayed for 7-10 days and 6.25% patients stayed for14 days due to wound infection.*

Conclusion: *The results of early surgical management of appendicular mass showed benefits in terms of single admission in hospital, less time consuming and lower cost of treatment. .*

KEY WORDS:- *Appendicitis, Appendicular mass, Early surgical management.*

INTRODUCTION:

Acute appendicitis is the most common cause of acute abdomen. The formation of appendicular lump occurs in 2-6% of cases durng the course of illness.[1] Appendicular mass is an inflammatory swelling of inflamed appendix, its adjacent viscera and greater omentum. When left as such it resolves sometimes or gets converted into an abscess [2]. During early part of the century it has been well recognized that appendicectomy is the treatment of choice for acute appendicitis, while the treatment of appendicular mass remained controversial. Oschner and Sherren described conservative treatment of

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appendicular lump. The proponents of immediate appendicectomy claim that the procedure is safe and eliminates the need for readmission, [3] reduces the total hospital stay. [4]

The management of appendicular mass is changing since, due to availability of broad-spectrum antibiotics, better pathological knowledge, postoperative care and anaesthesia. More and more people are changing to early surgical management of appendicular lump [5] and claim the good results of early surgical treatment of appendicular lump [5] and claim good results. [6,7] In this study we report the outcome of early surgical management of appendicular lump.

PATIENTS AND METHODS:

From January 2002 to January 2005, eighty patients of appendicular lump were included in this study, which was carried out at Surgical Unit II, Bolan Medical Complex Hospital Quetta. These patients were admitted through Surgical OPD and Emergency department. All the patients presenting with history suggestive of acute appendicitis followed by the formation of mass in the right lower quadrant of abdomen were included. .

The antibiotics were started preoperatively and continued postoperatively. Most of them were kept on ampicillin, gentamicin and metronidazole. Patients were operated on the next operative list of the ward. The positions were re-examined under general anaesthesia to confirm the presence of mass. Mostly right gridiron incision was made except in doubtful cases where midline or right lower para median incision was used.

RESULTS:

A total of 400 cases were admitted with the diagnosis of acute appendicitis during the study period. Appendicular lump was found in eighty (20%) cases. Most of the patients belonged to younger age group. Sixty-one patients were between 14-40 years of age. Fifty-six (70%) patients were males and twenty-four (30%) females. Male to female ratio was 2.33:1.

Sixty patients had 4-5 days duration of symptoms before admission to hospital. Fifteen patients had complaints of 6-10 days duration. Five patients had a longer duration of about twelve days.

Clinical presentations were pain in right iliac fossa in seventy-five patients, anorexia in forty cases, vomiting in sixty patients, fever in fifty patients and constipation/diarrhoea in thirty patients. On examination pulse was rapid (tachycardia) in fifty-five patients, temperature was raised in fifty-five patients between 99-101 ^{0}F. On palpation sixty patients had localized tender mass and twenty patients had rigidity and guarding making the palpation difficult. In ten of these patients palpable mass was found under general anaesthesia and in ten patients the mass was confirmed by ultrasound abdomen. Per rectal examination was done on fifteen patients where tenderness of anterior and lateral rectal wall found.

Total leucocyte count (TLC) was raised in almost all the patients. In forty patients TLC was between 9000-12000/mm3 while in twenty patients it was between 12000-24000/mmm3.

Plain x-ray abdomen in sixty patients was unremarkable and twenty patients showed signs of localized ileus. Ultrasound abdomen showed in all patients the appendicular mass.

In fifty patients (62.5%) mass was fixed in right iliac fossa, in eighteen patients (22.5 %) mass was mobile and in twelve patients (15 %) lump was extending into the pelvis. Fifty-five patients (68.75 %) were operated by classical gridiron incision and in fifteen patients (18.75 %) incision was changed to Rutherford Morrison incision. Right lower para median and midline laparotomy were performed in ten cases where perforated appendicitis was suspected. In twenty cases (25 %) of appendicular mass the collection of pus was found amounting between 20-60 cc. The lump was friable, oedematous and easily damageable. Operation time was dependent upon the size, fixity, friability, location i.e. in pelvis and presence of pus around the mass. In seventy-five patients (93.75 %) operation time was between 50-75 minutes and in five patients who underwent laparotomy it was 100 minutes. Primary closure of wound was done in all patients.

Parenteral antibiotics, usually triple regime of ampicillin, gentamicin and metronidazole, were given to all patients for at least 48 hours postoperatively. All the patients recovered smoothly.

Wound was infected in fifteen patients (18.75 %). They were treated by opening of whole of the incision and daily dressing with antibiotics after collecting sample for culture and sensitivity. Wounds were then secondarily sutured. Two patients, 55 years of age, developed pneumonia complicated by pleural effusion that was treated conservatively.

Most of the patients (n 66 -82.5%) stayed for 4-7 days postoperatively, nine patients (11.25 %) stayed for 7-10 days and five patients (6.25%) were hospitalized for 14 days due to wound infection.

DISCUSSION:

The most common cause of acute abdomen is acute

appendicitis and immediate appendicectomy is the universally accepted treatment. The incidence of appendicular lump in cases of acute appendicitis is 1-13%[8], which in our study was 20%. The incidence of appendicular mass formation has been increased probably due to injudicious use of antibiotics in cases of acute abdomen by the general practitioners or because of delay in reaching of the patients to the doctors from remote areas. This factor is true not only in Pakistan but in other parts of the world as well [9].

The argument against immediate appendicectomy for appendicular mass is that infection may spread during the manipulation at surgery. Friable and oedematous intestine may be damaged and results in enterocutaneous fistula and inadequate assessment of the inflammatory mass may lead to incorrect treatment.[8] The trend in our unit is towards the operative treatment; only in cases with medical problems conservative treatment is offered.

Most of the patients presented to us with a history of 4-5 days duration of symptoms (60 out of 80 patients). The delay in diagnosis is an important factor leading to the formation of appendicular lump. In another study it was concluded that patients with complicated appendix including perforation, abscess and mass waited 2-5 days longer than others.[10] Most of the patients were young, between the ages of 14-30 years; only 19 patients were between 30-60 years of age. In a study on 45 patients, most were in 2nd and 3rd decade of life.[11] In our study male to female ratio of patient was 2.33:1, the sex distribution is variable in different parts of the world. A study from Iran reported male to female ratio of 3.9:1[12], from Africa reported male to female ratio 4.5:1, while more females were affected in Europe as reported by Kirstensen and Hvid 1982 [13].

The management of appendicular lump is controversial.[14] Most of the surgeons favor initial non-operative treatment of appendicular mass with antibiotics followed by appendicectomy at a later stage as cited by Maingot 1990 [15], but the trend has changed considerably. [15 - 18] Recently most of the literature of surgery encourage early surgery. The recent change in trend is due to improved facilities of anaesthesia, better supportive care and good understanding of the disease pathology [14]. They believe that appendicectomy is technically possible in most of these cases.

This change in situation is due to certain problems with the conservative management of appendicular lump also. Some patients refuse conservative management [19] while conservative management has a failure rate of 3-10%. [12, 16] Some of the patients, who settle with conservative treatment, develop recurrent pain of appendicitis during the convalescence period while waiting for interval appendicectomy.

The patients have to undergo a period of considerable pain and repeated physical examination to monitor the course of the disease. This involves heavy workload on staff. The patients are not allowed for oral feeding for several days. The intravenous fluids and large doses of multiple antibiotics make the patient even more distressed. In this way both the patient and the surgeon remain in a state of uncertainty.

If the conservative treatment is successful, the patient goes home with an advice that he will have to come for an interval appendicectomy [20]. Readmission for interval appendicectomy adds to the cost of treatment and another period of absence from the job. Hurme et al [16] reported only 31% patients turn up for follow up and further investigation.

Most of the surgeons fear of surgery in cases of appendicular lump. They are not operating during the lump formation because of the chances of damage to acutely inflamed, oedematous gut and omentum, resulting in faecal fistula and formation of residual abscess. In our patients none of the above complications occurred. It is noteworthy that none of our patients even had prolonged ileus (more than 48 hours). Complications in our patients were limited to local wound infection. Sometimes inadequate assessment of the appendicular mass may result in incorrect treatment like right hemicolectomy which may be performed in the mistaken that malignant tumor is present [16]. Kisstensen and Hvid [13] reported four out of eight patients who underwent laparotomy for mass in right iliac fossa, hemicolectomy was done in four patients which later on proved appendicular mass.

In our study none of our patients underwent hemicolectomy. However it must be emphasized that appendicectomy in such instances is a difficult technical procedure and we have found that patience in dissection is the best safeguard against the inadvertent injury to the adjacent viscera. It is not always easy to recognize the technical difficulty prior to the exploration but the large immobile mass of one to three weeks duration points to difficult surgery.

The proponents of conservative management of appendicular mass/abscess claim that more aggressive therapy may spread an already localized peritonitis. It is not always possible to distinguish between a mass and an abscess before operation [19,11]. In our study ten patients were found to have collection of pus. In five cases it was suspected preoperatively and diagnosed with the help of

ultrasound. In five cases it was not suspected before surgery and was found per operatively.

The complication rate of surgery under these circumstances is variable. It is certainly less as compared to surgery for perforated appendix, which is reported as high as 81%[11,21]. The complication rate in cases of surgery in appendicular mass varies from 29 to 37.55%.[11 16 22]

In our study it was 13.75%. Twenty patients developed wound sepsis. Two patients developed postoperative pneumonia and pleural effusion. Most important problem was wound sepsis in twenty patients.

All patients were managed conservatively. Wound were infected in all ten patients in whom mass was associated with collection of pus. In present study wound sepsis was quite high probably because we always closed skin incision primarily. It is clear from present study that complication rate is quite low as compared to other studies. It is probably because of adequate drainage of pus, adequate cleaning of cavity with saline, placement of drain and use of broad-spectrum antibiotics cover in all patients. It can further be reduced by delayed primary closure of the skin wound.

Postoperative hospital stay is less in present study as compared to those mentioned by others.. Most of the patients discharged between 4-6 days of their treatment started. Only eight patients stayed in hospital for two weeks, due to wound sepsis and chest problem. The mean overall stay in hospital was 6 days. It is quite comparable to nine days[5] and 19.7 days[11] as reported by others.

We suggest that early surgery in appendicular lump is quite safe and cost-effective. Patients/ need a single admission and minimum hospital stay. There are fewer chances of missing the patient in follow up and missing the malignant pathology as compared to conservative management.

REFERENCES:

1. Arnbjorson E. Management of appendicular abscess. Current Surgery 1986; 41:7-9
2. Charles V, Mann RCG, Williams RS. The vermiform appendix "Bailey and Love's Short practice of Surgery" 23rd edition: Chapmann and Hall 2000; 1203-18.
3. Chouhdary Z.A, Syed AS, Mishra P. Early exploration of appendicular mass: Pak J. Surg, 1996; 12:64-66.
4. Jordan JS, Kovalcik PJ, Schwab CW. Appendicitis with a palpable mass: Ann Surg, 1981; 193:227-9
5. Vakilli C. Operative treatment of appendicular mass: Am J Surg, 1976; 131:312-4.
6. Williamsons RCG. in: General Surgical Operation Kirk 3rd Edition 1995; 256-57.
7. Jamal S. Appendix mass, aggressive surgical treatment; Specialist 1995:12; 51-4.
8. Hoffman J, Rasmussen O. Aids in the diagnosis of acute appendicitis. Br J Surg 1989; 76; 774-9.
9. Archibang AE, Ekanem I, Jibrin P. Appendicitis in southeastern Nigerian children cent; Afr J Med, 1995.
10. Temple CL, Huchroft SA. The natural history of appendicitis in adults: a prospective study; Ann Surg 1995; 221; 278-81.
11. Jordan JS, Kovalik P, Scwab. Appendicitis with a palpable mass. Ann Surg 1982; 227.
12. Ghaukmble DB, Hamage AS. Management of appendicular mass in children; Ann Trop Pediatr 1993; 13: 365-7
13. Erik Skoubo, Kristensen E, Ivan Hvid MD. The appendiceal mass, Results of conservative management. Ann Surg 1982; 196:584-87.
14. Nitecki S, Assalia A, Schein M. Contemporary management of appendiceal mass. Br J Surg 1993; 80:18-20.
15. Ellis H. Appendix. In: Maingot's abdominal operation (Eds. Schwartz SJ, Ellis H) 8th edition. Norwalk Appleton-Century, Crofts. 1990; 1349-1407
16. Hurme T, Nylamo E. Conservative versus operative treatment of appendicular abcess: Experience of 147 consecutive patients. Ann Chir Gynecology 1995; 84: 33-6.
17. Condon RE, Sabastian DC. Sabastian textbook of Surgery.15th edi.1991; pp 894-899.
18. Williamson RCN, Cooper MJ. Emergency abdominal surgery; Vol 17:1990.
19. Thomas DR. Conservative management of an appendix mass. Surg 1973; 73:677-80.
20. Ellis H: Appendix In: Schwartz SI, Ellis H Eds' Maingot's abdominal surgery; Norwalk. Connecticut. Appleton- Century Crofts 1989:967-9.
21. Rashid KA. Perforated Vs non-perforated appendicitis. J Pak Med Assoc 1987; 325.
22. Lewin J, Fenyo G, Engstrom L. Treatment of appendiceal abscess. Acta Chrirurgica Scandinavica 1988; 154:123-5.

ORIGINAL ARTICLE

PROPHYLACTIC USE OF OXYTOCIN VERSUS OXYTOCIN PLUS ERGOMETRIN FOR PREVENTION OF POST-PARTUM HAEMORRHAGE.

UZMA HASHAMI, SADIA SUBOHI

ABSTRACT

Objective *To assess the effects of oxytocin (Syntocinon) versus oxytocin plus ergometrin (Syntometrin) in reducing the risk of post partum haemorrage and to find out their side effects.*

Design *Comparative analytical study*

Place and Duration of Study: *The study was performed at Jinnah Postgraduate Medical Centre, in the Department of Gynaecology & Obstetrics over a period of one year from January 2002 to December 2002.*

Patient and Methods *Three hundred patients were selected by non-probability convenience sampling. This study was conducted on the patients admitted in labour room with singleton pregnency in whom vaginal delivery was imminent. The patients were grouped in three categories. The group Icomprised of 150 patients who received injection oxytocin 5 unit I/V alone. The group II comprised of 150 patients who received injection oxytocin 5 unit & injection ergometrin 0.5mg. I/M. The injections were given after expulsion of placenta. Blood loss during delivery was estimated by measuring the amount of blood clots and weighing the towels and swabs soaked before and after delivery. Any delayed haemorrhage within in the first 24 hours after delivery was also recorded.*

Maternal blood pressure was measured immediately after delivery. The side effects like nausea, vomiting and headache were noted from time ranging _-1 hour after delivery. Data was analyzed using SPSS version 10.

Results *The rate of 46.7% of blood loss of 500ml in syntocinon group was observed significantly high as compared to that of 36.7% of syntometrin (p 0.05). The rate of adverse effects in group I was 8% and 17.3% in group II. The data revealed a significantly high rate (Z=2.39 P=0.008) of adverse effects in group II patients than group I (p 0.05).*

Conclusion: *Oxytocin alone is as effective as the use of oxytocin plus ergometrin in the prevention of post partum haemorrhage and is associated with significantly fewer maternal side effects.*

KEY WORDS:- *Post-partum haemorrhage, Oxytocin, Delivery*

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INTRODUCTION

Post partum haemorrhage (PPH) is still a major contributor to maternal morbidity and mortality. Primary PPH is one of the top five causes of maternal mortality in both developed and developing countries. PPH accounts

for 28% of maternal deaths in developing countries i.e about 125,000 women each year (1,2). Primary PPH is said to occur after 5% of all deliveries. PPH denotes excessive bleeding of more than 500ml in vaginal deliveries. Blood loss during the first 24 hours after delivery is early PPH, Blood loss between 24 hours & 6 weeks after delivery is late PPH[3-5].

Most common cause of PPH is uterine atony (75-90%). Other cause include placenta accerta, lower genital tract laceration, coagulopathy, uterine inversion and ruptured uterus[6,7]. PPH is largely preventable. The management of PPH is best described in terms of anticipation and prevention. This includes identification of the women at the risk for uterine atony, or with history of primary PPH. The active management of third stage of labour and the routine use of oxytocics in 3rd stage of labour helps in achieving this goal. The high risk patients require adequate pre delivery counseling with full explanation of preventive measures.

The drugs used for prevention of PPH are oxytocin and ergometrin, given alone or in combination. They may be given after the delivery of placenta. Oxytocin produces rhythmical contractions of uterus augmenting retraction and its effect is noticeable about 3 minutes after I/M injection. An I/V injection of 5 units of oxytocin produce effective contractions for about 15 minutes[8].

An I/M injection of ergometrin will result in a more prolonged contraction with retraction. There seems to be no place for the prophylactic use of ergot alkaloids[9]. The prophylactic use of oxytocin drug is now well established but difference in technique of administration and in selection of drug still exists.

There are strong suggestions of benefit for oxytocin in terms of PPH as compared to syntometrin or ergometrin[10]. The prophylactic administration of oxytocin alone is as effective as the use of oxytocin plus ergometrin in prevention of PPH and is associated with lower rate of side effects[11]. Keeping in view of the significance of this subject a study was designed to delineate the role of syntocinon in third stage of labour for prevention of PPH.

PATIENTS & METHODS

A comparative study was conducted on the patients admitted with signleton pregnancy in whom vaginal delivery was imminent. Information regarding age, gestational age, parity, past history of PPH, hypertension, diabetes mellitus and caesaren section were noted. Patients with medical diseases such as cardiac problems, hypertension, pre eclampsia and eclampsia, women with twin pregnancy, polyhydraminos and antepartum haemorrhage were excluded. Patients with previous history of PPH or caesarean section were also excluded. Patients with prolonged labour (more than 10 hours in multigravida or more than 18 hours in primigravida), were also excluded.

Women were divided in two groups. Group 1 comprised of 150 patients who received injection oxytocin 5 units I/V alone and group II comprised of 150 patients who received injection oxytocin 5 units and injection ergometrin 0.5mg I/M. After admission systemic examination was done along with per abdominal and per vaginal examination. Towels and swabs used for delivery were already weighed and delivery was conducted on Macintosh rather than towel. The injections were given after delivery of placenta. Any delayed haemorrage within first 24 hours after delivery was recorded. Maternal blood pressure was measured immediately after delivery and repeated after 30 minutes. The duration of first, second and third stages of labour were recorded. Patients was kept in labour room under observation for 1 hour after delivery and then shifted to observation room for 4 hours. During this period, symptoms such as nausea, vomiting and headache were recorded.

Data was analyzed by using SPSS. To compare the proportions of entire characteristics between the two groups, Z-test for rate of adverse drug effects and Pearson's Chi-square test for comparison of post partum haemorrhage were used and a p value of <0.05 was considered significant.

RESULTS

The average age in group 1 was 27.49 ± 6.58 years (ranging from 17 to 43 years), while in group II, it was 27.17 ± 6.27 years (ranging from 16 to 47 years). Ninety one women were primigravida and 209were multigravida. The number of women who were primigravida in group 1 were 44/150 (29.3%) and 47/150 (31.1%) in group II.

Blood loss was divided into 3 measures, less than 300ml, up to 500ml and more than 500 ml. The rate of more than 500ml blood loss was observed 4.3%. This rate in group 1 was 4.7% while 4% in group II. (table I).

TTABLE -I AMOUNT OF BLOOD LOSS:

Amount of Blood loss (in ml)	Groups		Significance
	Group A (Oxytocin group) n=150	Group B (Oxytocin + Ergometrin) n=150	
Up to 300ml	73 48.7%	89 59.3%	Z= 1.74 P<0.04*
300 ml - 500ml	70 46.7%	55 36.7%	Z= 1.76 P < 0.03*
> 500ml	7 4.7%	6 4.0%	Z= 1.74 P<0.40

Shows statistical significance at p < 0.05

Over all 38 (25.33%) patients showed adverse effects after the treatment. The rate of adverse effects in group 1 was 8% and 17.3% in group II. The data revealed a significantly high rate of adverse effects in group II than in group I. (table II).

TABLE -II COMPARISON OF ADVERSE EFFECT ASSOCIATED WITH DRUGS USED

Adverse effects	Groups		Significance
	Group A (Syntocinon group) n=150	Group B (Syntometrin) n=150	
Nausea	5 3.7%	12 8.0%	X^2=3.06
Headache	5 3.3%	9 6.0%	X^2=1.20
Vomiting	1 0.7%	3 2.0%	X^2=1.01 P < 0.31
Transient rise in Blood Pressure	0 0%	2 1.3%	X^2=2.01 P < 0.16
Transient fall in Blood Pressure	1 0.7%	0 0%	X^2=1.00 P< 0.30

DISCUSSION:

Maternal morality mostly results from complications of third stage of labour and in particular from post partum haemorrhage[11]. Nearly all maternal deaths (99%) occur in developing world[12]. Where other factors may contribute to death in the presence of severe PPH, blood loss was the primary end point assessed in this trial. We choose 500ml as the threshold above which the diagnosis of PPH was made. This was the practice in the hospital before the study and is a widely used threshold [13].

A prospective cohort study reported I/V oxytocin being as effective as I/M syntometrin in prevention of post partum haemorrhage but associated with a significantly higher rate of unpleasant maternal side effects such as nausea, vomiting, headache, and rise in blood pressure. Our results confirmed the efficacy of I/V oxytocin in preventing PPH with a lower risk of hypertension. The superior prophylactic effects of I/V over I/M oxytocin is likely to be related to the early onset of action of the I/V administration. As suggested by Soriano et al [14] early delivery of uterotonic drug is associated with a lower risk of PPH. The benefits of oxytocin over syntometrine should not be undermined by a rigid approach towards the route of administration of the drugs. Unpleasant maternal side effects are well reported with the use of syntometrin and the incidence in the Western studies was as high as 20-30% [14,15].

In our study, the use of syntometrine was associated with a significant increase in the risk of nausea, vomiting, and headache. High rate of side effects associated with the use of syntometrine as observed in our study have been reported by Nnieminen and Dumoulin Other maternal side effects such as pulmonary oedema and fluid retention, were not observed in our trial. Our study contribute to this debate only as far as showing that oxytocin can be safely, administered intravenously and therefore is the drug of choice.

REFERENCES:

1. Mousa HA. Allfirevic Z. Treatment of primary PPH. Cochrane Database Syst Rev 2003; 1: CDOO3249.
2. Dudely DJ. Oxytocin use and abuse. Clin Obstet Gynaecol 1997; 40: 516-24.
3. Selo-Ojeme DO. Primary PPH. J Obstet Gynaecol 2002; 22: 463-9.
4. Anonymus. The management of PPH. Drug Ther Bull 1992; 30: 89-98.
5. Sarah BH, Poggi MD, Peter Z. Kapernick MD. PPH and abnormal puerperium.
6. Macphail S, Tizgeralol J. Massive PPH. Curr Obstet Gynaecol 2001; 11: 108-14.
7. Stanco LM, Schrinner DB, Panel RN, Mushell DR. Emergency peripartum haemorrhage and associated risk factors Am J Obstet Gynaecol 1993; 163: 879-83.
8. Beazley JM, Whitefield Charles R. Third stage of labour. Natural labour and active management. Dewhurst's textbook of obstetrics and gynaecology for postgraduates 6th ed. London: 1999; 307-10.
9. Roosmaten J, Heckstu YA, Van Donger PW, Van Yree TB, Van Dongen PW, DeGruot AN. Ergot alkacoids. Current status and review of clinical pharmacology and therapeutic use compared with other oxytocic in obstetrics gynaecology. Drugs 1988; 58: 523-35.
10. Nieminen U, Jawinen PA. Comparative study of different medical treatments of the third stage of labour. Ann Chir Gynaecol 1963; 53: 424-9.
11. Kwast B. Postpartum haemorrhage, in contribution to maternal mortality. Mid-wifery 1991; 7: 64-7.
12. Report of Technical Working Group. The prevention and management of post-partum haemorrhage Geneva World Health Organization 1999: (WHO/MCH/90.7).
13. Soriano P, Dulitzki M, Schiff E, Barkai G, Mashiach S. Seidman PS A prospective cohort study of oxytocin plus ergometrine compared with oxytocin alone for prevention of postpartum haemorrhage. Br J Obstet Gynaecol 1996; 103: 1068-73.
14. McDonald SJ, Predriville WJ, Blair E. Randomized controlled trial of oxytocin alone versus oxytocin and ergometrine in active management of the third stage of labour. Br Med J 1993; 307: 1167-71.
15. Dumoulin JG. A reappraisal of the use of ergometrine J Obstet Gynaecol 1981;1:178-81.

THORACOTOMY WITHOUT CHEST DRAIN

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ABSTRACT

Objective *To evaluate the outcome of thoracotomy without chest drain.*

Design *Quasi experimental*

Place and Duration of Study: *From January 1999 to April 2004 in private Hospital*

Patient and Methods *This is a retrospective study, performed at hospital over a period of 4 years from January1999 till April 2004. All performed without chest intubation and the results were evaluated in the early and late post operative phases. All thoracotomies done with placement of chest tube were excluded.*

Results *Out of 189 thoracotomies performed over a period of 4 years and 4 months, 161 patients underwent cardiothoracic surgical procedures without insertion of chest drain. Ages of the patients' ranged from 2 weeks to 65 years, with a mean of 28 years. There were 83 males and 106 females. Four patients developed surgical emphysema over the wound site. In one patient it continued to progress, compelling chest drain insertion Post-operative recovery was quicker and the hospital stay remained short.*

Conclusion: *It is safe to perform majority of thoracic procedures without retaining chest drain at the end. This expedites the recovery, save the patients from unnecessary pain and any other possible complications there of.*

KEY WORDS:- *Thoracotomy, Chest tube, Thoracostomy*

INTRODUCTION:

Introduction:

Introduction of chest tube for evacuation of air or fluid is an established procedure in thoracic surgical practice, be it emergency or elective. Though life saving in many clinical conditions, it remains a potential source of infection. Most often than not, it is one of the main sources of patients' discomfort. Operating on a patient without retaining a drain at the end, would be more acceptable to patient and also contributes to early recovery and shorter hospital stay. There are other aspects of chest drain management such as dressing of insertion site, actions following accidental disconnection and tube removal. Particularly with subjects under the age of 18 years[1]. Although pain can be reduced[2,3], it can still make recovery slow. Problems with prolong restriction in bed especially at extremes of age often complicates otherwise smooth hospital course. More over the procedure itself can be a cause of serious complications[4-9].

The objective of this study was to evaluate the results of thoracotomy for various reasons without putting in chest tube drain.

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PATIENTS AND METHODS:

A retrospective review of cases was performed, over a period of 4 years and 4 months from January 1999 till April 2004. All procedures were elective. Patients were admitted a day or two in advance of surgery. Surgery was carried out under general anaesthesia, except in one case, where a patient with superior vena cava syndrome could not lie flat. Anterior mediastinotomy (Chamberlain's procedure) was therefore performed under local anaesthesia in semi-recumbent position.

After completion of procedure haemostasis was ensured, and air was evacuated through a temporary under water seal tube introduced in chest cavity through the wound. Evacuation of air was ensured by manual hyperinflation of the lung by the anaesthetist, while the wound was being closed. This tube was then withdrawn and lung remained hyperinflated. Long acting local analgesia was routinely infiltrated into the wound.

After recovery from anaesthesia, upon verbal complaint of pain or on visible discomfort, guarded doses of synthetic opioid derivatives i.e. nalbuphaine 0.5-1mg at a time, intravenously were administered. This continued until patient was comfortable. Respiratory rate and oxygen saturation were monitored aiming a saturation of above 96% on room air. Post operative chest x-ray was not routinely performed, unless there was some clinical apprehension of presence of or progressively increasing pneumothorax. In all patients with surgical emphysema follow-up chest x-ray was done.

RESULTS:

Ages of the patients' ranged from 2 weeks to 65 years, with a mean of 28 years. There were 83 males and 106 females. A total of 189 thoracotomies were performed. Twenty three patients had Modified Blalock Taussig shunt and 5 had coarctation of aorta repaired. In these cases chest tube was retained at the end of procedure and thus excluded. Thirty patients had closed mitral commisurotomy, 60 had left lateral thoracotomy for patent ductus ligation. Various other procedures performed are given in table I.

TABLE-I SURGICAL PROCEDURES PERFORMED

	n 161
Closed Mitral Commisurotomy	38
Patent Ductus Occlusion	60
Pulmonary Artery Banding	18
Anterior Thoracotomy (Chamberlain's Procedure)	28
Lateral Thoracotomy (Hydatid Cyst Removal)	17

All the patients recovered fully from anaesthesia within two hour of completion of surgery. With this protocol patients remained stable and comfortable. Need for nalbuphaine administration did not exceed 8-10 mg in formal lateral thoracotomy patients. Oxygen saturation always remained above the desired level. Four patients developed surgical emphysema over the wound site. In one patient it continued to progress, compelling chest drain insertion. Chest x-ray showed small pneumothorax in two and no pneumothorax in another two. In one patient pneumothorax progressed to become significant necessitating chest tube insertion on the 3rd post-op day. All except one patient were allowed to sit up within six hours of recovery and were encouraged to mobilise within 12 hours thereof.

All patients except ones with formal lateral thoracotomy and the one necessitating chest drain insertion were discharged within 24 hours of surgery, with advice to take strong oral analgesia. Patient who had formal lateral thoracotomy were discharged on 3rd or 4th post-operative day. The patient with subsequent chest tube insertion continued to have air leak for 8 days which finally settled. Wound of all patients was reviewed in out patient clinic after 7 days. Follow-up had been satisfactory in all cases.

DISCUSSION:

The foremost indication of thoracostomy after a thoracotomy is evacuation of air, which may continue to leak from pulmonary dissection for a variable period of time. Drainage of blood or fluid is another strong indication. As for the air leak, we feel that if it were not any pulmonary resection or a clean dissection with no residual air leak, primary closure could be considered. However recovery from anaesthesia has got to be smooth, for if pulmonary alveolar end expiratory pressure increased pnemothorax would occur. There are a number of disadvantages of chest tube insertion. Pain, limitation in taking deep breath, difficulty in mobilisation and potential source of infection are only few to mention.

In patent ductus ligation or close mitral commisurotomy once haemostasis is satisfactorily achieved there remains no need to retain a drain. This strategy of avoiding tube thoracostomy has been very rewarding. Need for analgesia has been considerably low. It has helped to mobilise patients early and hospital stay remained significantly short. We ensured that patient remained calm and sedate in early post-op period to reduce chances of recurrent air leak from potential raw areas.

The management of chest drain bottle again needs skilled nursing. There are numerous reports in the literature addressing lack of special understanding and availability of trained staff to avoid complications that may occur days later[10-14]. Patient tolerance remains a major issue in

retaining a chest tube[15,16]. Surgical emphysema, unless continues to increase, as occurred in one of our patients, is taken as a sign of incomplete evacuation of air in the first instance. As the patient starts taking deep breath, and pulmonary excursion increases, residual air in thorax dissipates through breached pleura into subcutaneous tissue. In due course it gets absorbed.

In conclusion it is felt that if thoracic procedures can be carried out without retaining a chest tube at the end, expedites the recovery, saves patient from unnecessary pain, discomfort and any possible complication thereof.

REFERENCES:

1. Charnock Y, Evans D. Nursing management of chest drains: a systematic review. Aust Crit Care 2001; 14:156-60
2. Gray E. Pain management for patients with chest drains. Nurs Stand 2000; 14: 40-4
3. Campbell P, Neil T, Wake PN. Horner's syndrome caused by an intercostal chest drain. Thorax 1989; 44: 305-6
4. Nahum E, Ben-Ari J, Schonfeld T. Acute diaphragmatic paralysis caused by chest-tube trauma to phrenic nerve. Pediatr Radiol 2001; 12: 45 –8.
5. Shen SY, Liang BC. Horner's syndrome following chest drain migration in the treatment of pneumothorax. Eye 2003;17:785-8
6. McConaghy PM, Kennedy N. Tension pneumothorax due to intrapulmonary placement of intercostal chest drain. Anaesth Intensive Care 1995; 23:496-8.
7. Chung SC, Li AK. Chest drain penetration into the transposed stomach after Ivor-Lewis esophagectomy: diagnosis by early postoperative endoscopy. Surg Endosc 1992; 6:195-6
8. Brownlow HA, Edibam C. Systemic air embolism after intercostal chest drain insertion and positive pressure ventilation in chest trauma. Anaesth Intensive Care. 2002;30:660-4
9. Bailey RC, Esberger D. Development of tension pneumothorax after chest drain insertion. J Accid Emerg Med. 1998;15:128 –30.
10. Lehwaldt D, Timmins F. Nurses' knowledge of chest drain care: an exploratory descriptive survey. Nurs Crit Care 2005;10:192-200
11. Allibone L. Nursing management of chest drains. Nurs Stand 2003;17: 45-4
12. Weng PS. Management of pneumothorax. Never clamp a chest drain. Br Med J 1993;30: 443 - 45
13. Corless JA, Barbores M, Donoghue S, et al. Occlusion of chest drain bottle air outlet. Thorax 2001;56: 585-6
14. Tang A, Hooper T, Hasan R. A regional survey of chest drains: evidence-based practice? Postgrad Med J. 1999;75: 471-4
15. Owen S, Gould D. Underwater seal chest drains: the patient's experience. J Clin Nurs 1997; 6: 215-25
16. Fox V, Gould D, Davies N, et al. Patients' experiences of having an underwater seal chest drain: a replication study. J Clin Nurs 1999;8: 684-92

STATUS OF HEPATITIS B VACCINATION AMONGST HEALTH CARE WORKERS AND THEIR KNOWLEDGE ABOUT PREVENTION STRATEGIES

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ABSTRACT

Objective *To assess the status Of Hepatitis B Vaccination Amongst Health Care Workers (HCW) and Their Knowledge About Prevention Strategies*

Design *A questionnaire based report.*

Place and Duration of Study: *National Institute of Child Health, Karachi from January 2006 to April 2006.*

Patient and Methods *Three hundred and eighteen health care workers (age range 20-59 years) filled the questionnaire. Amongst them 186 (58.49%) were male. The study showed that 159 (50%) were completely vaccinated, 59 (18.55%) partially vaccinated and 100 (31.44%) were unvaccinated. The study also showed that among vaccinated HCW. 21 (13.20%) had their antibody titer done. Only 25 (15.72%) had booster dose. Needle stick injury was reported by 174 (54.71%) health care workers. Out of this only 56.60% had complete vaccination. Only 181 (56.91%) health care workers wear gloves while handling blood and blood products.*

Conclusion: *Awareness among health care workers about getting them vaccinated is present but it did not materialize in actuality. The reasons mentioned are not forthcoming with, when one calculates the life long complications that may result from not getting vaccinated. The careless attitude in their clinical practice expose them to the risk of getting infected with contaminated materials.*

KEY WORDS:- *Health care workers, Hepatitis B vaccination status, Risk factors.*

INTRODUCTION:

Hepatitis B is a serious global health problem. Two billion people have been infected world wide with hepatitis B virus(HBV). More than 350 million have chronic life long infections. [1] Hepatitis B is considered as silent disease that can infect many without making them feel sick.[2] Health care workers often do not realize that they are at risk for HBV infection.[3] HBV was the first blood borne pathogen to be recognized as occupational risk among HCW. The infection is unavoidable for HCW in daily patient care.[4] Millions of health care workers around the world are facing a daily risk of contracting life threatening occupational infection due to HBV from exposure to

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patient's blood and body fluid.[5] The risk of infection varies with occupation, life style or environment. The risk of hepatitis B infection depends how often they are exposed to blood or blood products through percutaneous and permucosal exposure. [6]

The centre for disease control estimates that 18,000 health care workers whose job involves exposure to blood, become infected with HBV each year.[7] The ease of the transmission of the virus is one of the many challenges facing public health professionals. HBV appears to be far more infectious than HIV. Approximately 30 – 40% of acute HBV infections in USA occur in individual with no known risk factors. In comparison, only 4% of AIDS cases have occurred in individuals with no known risk factors. [8]

The diagnosis of HBV infection is generally made on the basis of serology. HBs Ag is detectable several weeks after infection and is characterized by high rate of viral replication. Individual who are HBs antigen positive have high viral load and are more likely to transmit HBV infection.[9] Hepatitis B is preventable disease. Effective vaccine is available for the prevention of hepatitis B infection. All individuals at risk for infection should be vaccinated. Post exposure prophylaxis with hepatitis B immunoglobulin is also effective for non-immune individuals after a known exposure, e.g needle stick.[10] This study was undertaken to assess the vaccination status among different categories of health care workers and to identify the risk factors for hepatitis B in a tertiary care hospital in Karachi.

SUBJECT & METHODS

A questionnaire based study was conducted at National Institute of Child Health, Karachi from January 2006 to April 2006. In this study 318 health care workers participated. A questionnaire was made and distributed among all the categories of health workers who were at high risk for hepatitis B and was collected after 24 hours. The study population included doctors, nursing staff, paramedics and technicians. All the health care workers who are given the questionnaire responded, the questionnaire included the designation of health care workers and question regarding status of hepatitis B vaccination, reason for being not vaccinated, post vaccination immune status, reason for not getting post vaccination immune status done, booster doses and various risk factors like needle stick injury, post exposure prophylaxis taken by the health care workers after prick and wearing gloves while performing procedures or handling blood and blood products. Descriptive statistics like percentages, mean and range were obtained.

RESULTS:

A Total of 318 health care workers with an age range 20-59 years responded. Among them 186 (58.49%) were male. The percentage distribution of the respondent by their designations is shown in table I. The study showed 159 (50%) of the respondents were completely vaccinated, 59 (18.55%) left in the middle of regimen while 100 (31.44%) were not vaccinated.

Out of 103 doctors, 85 (82.52%) were completely vaccinated, 11 (10.67%) were partially and 7 (6.97%) were unvaccinated. Among doctors, all the house officers (n 11) had completed the vaccination schedule. While out of faculty doctors (n 18) and residents (n 71), who formed the largest group only 56 (78.87%) were vaccinated.

The second group comprised of nursing staff which is the largest group (n 119), 37 (31.09%) were completed vaccinated, 17 (14.28%) left in the middle and 66 (55.4%) had no dose. Among nursing staff complete vaccination status found in 11 nurse aids (55.1%), 4 (28.57%) head nurses and 22 (25.88%).charge nurses. Third group comprised of paramedics (n 65), of this 22 (33.84%) were completely vaccinated, 25 (38.46%) left in the middle and 18 (27.69%) did not get a single dose.

Last group comprised of technicians from laboratory, blood bank, operation theatre and x-ray department. Out of 31 technicians 15 (48.38%) were completely vaccinated, 6 (19.35%) left in the middle of regimen and 10 (32.25%) did not get a single dose.

Out of 159 (50%) completely vaccinated health care workers, 21 (13.20%) had their antibody titer done. Out of those who did not have it done, 12.3% blamed high cost, 16.3% - laziness, 42.5% - ignorance, 9.3% could not spare time and 19.5% had the misconception that it was not required. In this study among vaccinated health care workers 25 (15.72%) had booster dose. The main reason for not being vaccinated or discontinuing, the doctors quoted lack of time and other groups of HCW blamed high cost of vaccine (table II).

Needle stick injury was reported by 174 (54.71%) health care workers. Needle stick injury were highest among vaccinated staff (n 90 - 56.60%), as compared to non vaccinated (n 84 - 52.82%). Those who had needle stick injuries squeezed the site of prick and let the blood ooze out, then cleaned with spirit and swab (58.65%). 10.6% washed with water only, 7.82% washed with water and then cleaned with spirit and swab. 18.99% washed with soap and water only and 3.9% cleaned with pyodine. 181 (56.91%) HCW wear gloves while handling blood and blood products. Those who did not wear the gloves blamed non availability of although they were available in ample amount (table III).

TABLE-I THE PARTICIPANTS OF THE STUDY N = 318

S.No	Description	No of Respondent
1	**Doctors**	**103**
	• Faculty	21
	• Resident	71
	• House Officers	11
2	**Nurses**	**119**
	• Head Nurses	14
	• Charge Nurses	85
	• Aid Nurses	20
3	**Paramedics**	**65**
4	**Technicians**	**31**

TABLE-II VACCINATION STATUS

S.No	Description	No of respondent	Vaccinated	Partially Vaccinated	Not Vaccinated	Antibody titer done	Booster
1	Doctors	103	85 (82.52%)	11(10.67%)	7(6.79%)		
	1. Faculty	21	18 (85.71%)	1(4.79%)	2(9.52%)	4(19%)	2 (8%)
	2. Resident	71	56 (78.87%)	10(14.08%)	5(7.04%)	8(11.26%)	8 (32%)
	3. House Officers	11	11 (100%)	Nil	Nil	4(36.3%)	2 (8%)
2	Nurses	119	37 (31.09%)	17(14.28%)	66 (55.4%)		
	4. Head Nurses	14	4 (28.57%)	Nil	10(71.42%)	1(8%)	1 (4%)
	5. Charge Nurses	85	22 (25.88%)	11 (12.94%)	52(61.17%)	0(0%)	11(44%)
	6. Nurse Aid	20	11(55%)	6 (30%)	3(15%)	1(5%)	0
3	Paramedics	65	22 (33.84%)	25 (38.46%)	18 (27.69%)	2(3%)	0
4	Technicians	31	15(48.38 %)	6 (19.35%)	10 (32.25%)	1(3.2%)	1(4%)

TABLE-III CLINICAL PRACTICES

S.No	Description	No. of respondent	Wear Gloves	Needle stick injury
1	**Doctors**	**103**		
	1. Faculty	21	11(52.3%)	14(66.6%)
	2. Resident	71	23(32.39%)	35(49.2%)
	3. House Officers	11	3(27.2%)	9(81.8%)
2	**Nurses**	**119**		
	4. Head Nurses	14	12(85.7%)	5(35.7%
	5. Charge Nurses	85	55(64.7%)	43(50.5%)
	6. Nurse Aid	20	15(75%)	16(80%)
3	**Paramedics**	**65**	42(64.6%)	48(73.8%)
4	**Technicians**	**31**	20(64.5%)	4(12.9%)

DISCUSSION:

Pakistan is facing a huge burden of HBV disease. Up to 60% of persons infected with the HBV virus may develop complications related to cirrhosis or hepatocellular carcinoma.[10] It is estimated that at least 300 million people die each year from hepatitis B associated with acute and chronic liver disease world wide.[11]

Our study revealed 50%of HCW were completely vaccinated. A study from Aga khan University Hospital reported that 86%of their HCW were completely vaccinated.[12] Nasir et al reported 49% of HCW at Allama Iqbal Medical College [13] and Younus et al have reported that 72% doctors were vaccinated among those working at Sir Ganga Ram Hospital and Fatima Jinnah Medical College Lahore.[14] A study from Brazil showed 39% vaccination status of health care worker. [15]

A study by Nasir et al revealed that the main reason for non vaccination among health care workers was the high cost of vaccination.[13] They concluded that the cost for vaccination should be paid by the health centre. The Aga Khan University Hospital provides free of cost vaccination against Hepatitis B. They observed that despite the availability of free vaccination, a target of 100% vaccination status was not achieved.[12] In this study, among doctors, house officers had better vaccination status (100%) than residents (78.8%) and faculty (85.7%).

Among nursing staff, our study revealed better result in case of nurse aids (55%) than charge nurses and head nurses (21.4%). Whereas AKU study had much higher vaccination status among nursing staff, midwives (96.0%) had better results than registered nurses (94.0%) and nursing attendant (75%). [12] Paramedical staff had 33.8% vaccinated status in our study, whereas a study conducted in Allama Iqbal Medical College and its affiliated teaching hospital reported none of the paramedical staff were vaccinated.[13]

In our study amongst technicians only 15 (48.3) were vaccinated. AKU reported much high vaccination status among laboratory technicians (78.8%0 and operating room technicians (78.7%).[12] Other studies have reported that 3.75% of the laboratory staff was vaccinated at Fatimah Jinnah Medical College and 45% of Lab workers were vaccinated at Allama Iqbal Medical College. [13,14] In this study, doctors quoted lack of time as the main reasons for not receiving vaccination. Nursing staff, paramedic & technicians attributed high cost of vaccine as the main reason for not getting themselves vaccinated or discontinuing.

Out of 50% completely vaccinated health care workers 13.20% had their antibody titer done. Servo conversion status after vaccination is not done routinely. In the study conducted at AKUH only 19% of the vaccinated health care workers had checked their antibody titer.[12] Another study reported only 10% of health care workers had checked their antibodies after hepatitis B vaccinations. [16] In our study, only one person was found to have low antibodies after hepatitis B vaccination. While a study

showed 3% workers were found to be negative for antibodies after vaccination. [12]

Centre for diseases control and prevention recommends antibody test 1 to 2 months after completing 3 doses regimen of hepatitis B vaccination in health care workers. If the test turns out to be negative, the 3 dose regimen has to be repeated and antibodies should be rechecked. If antibodies are again found to be low, then no further vaccination is advised.[17] AKUH has implemented a new policy in which all health care workers who have received 3 doses of vaccinations will be tested for antibodies.[12] In our study 15.72% had booster doses.

Available data shows that the vaccine induced antibody level decline with time. Nevertheless, minimum memory remains intact for over 11 years following immunization and both adults and children with declining antibody level are still protected against significant HBV infection. Chronic HBV infection has only rarely been documented among vaccine responders. [18]

In our study needle stick injury was reported in 174 (54.71%) health care workers. The AKU study reported 41.1% among HCW. Studies from Saudi Arabia reported 74% and Brazilian study, 58% needle stick injuries. [15,16] In USA, out of 56 millions HCW, 800000 reported needle stick injury.[19] In our study, the incidence of needle stick injuries in completely vaccinated responding was high (56.60%) as compared to those not vaccinated and partially vaccinated (52.83%). A study from AKU also observed the same.[12] Being pricked with contaminated needles is an important way of spreading HBV. The risk of infection from an injury with a needle containing infected blood is between 10% to 35%. In our study 56.91% health care workers wear gloves when they handled blood and blood products.

CONCLUSION:

It has been observed that though awareness among health care workers about hepatitis B is present, but it was of no use as majority did not get themselves vaccinated with the in-convincing reasons put forward as a justification.

REFERENCES:

1. Hepatitis B fact sheet No 204, Geneva, world Health organization, 2000 (http://www.who.int/mediacenre/factssheet

2. Lanphear BP, Linnemann CC Jr, Cannon CG, Ronde MM. Decline of Clinical Hepatitis B in workers at a General Hospital: Relation to increasing Vaccine Induced Immunity. Clin-infec-Dis. 1993; 16:10-14.

3. Spekowitz KA. Occupationally acquired infection in Health Care Workers. Ann. Intern. Med. 1996; 125:826-34.

4. Perry J, Jagger J. The international Health care worker safety counter. Hospital Decisions International Spring 2003:171-173.

5. Alter MJ, Hadler SC, Margolis HS, Alexander WJ, Hu.PY et al. The changing epidemiology of Hepatitis B in United States. Need for alternative vaccination strategies. JAMA;1990: 2631218-22.

6. Hepatitis B immunization "Introducing Hepatitis B into National Immunization Service. Fact sheets Geneva 2001 WWW.WHO Internal / vaccine-document

7. A comprehensive strategy to eliminate transmission of Hepatitis B virus infection in United States MMWR 12/23/05, 54(RR16; 1-23.

8. Centre for disease control and prevention "Viral Hepatitis B, fact sheets. WWW cdc gob / NCIDOT/disease/fact/htm.

9. Zuberi SJ "Seroepidemiology of HBV/HCV in Pakistan Int. Hepatol Comm 1996; 5:19-26.

10. Khan M, Ahmad N, Epidemiology of Hepatitis B in SAARC countries. Int.Sarisic, Okuda K (edi) Hepatitis B & C carrier to cancer. New Dehli. Harcourt 2002:19-23.

11. Ali NS, Jamal K,Riaz Q. Hepatitis B vaccination status and identification of risk factor for hepatitis B in Health Care workers. J Coll Physicians Surg Pakistan. 2005; 15:257-60.

12. Nasir K, Khan KA, Kadri WM, Saleem S, Tufail K, Shaikh HA et al. Hepatitis B vaccination among health care workers and student of medical college. J Pak Med Assoc. 2000; 50: 239-40.

13. Younus BB, Khan GM, Akhtar P, Chaudhary MA. Vaccination against Hepatitis B among doctors at teaching hospital in Lahore. Pak.J. Med.Sci. .2001: 17; 4:229-32.

14. Costa JM, Pasqualotto C. Hepatitis B vaccination of health care workers is not yet a reality. Braz Infect Dis 1997; 1:248-55.

15. Alam M. Knowledge, attitude and practices among health care workers on needle stick injuries. Ann.Saudi.Med.2002; 22:396-9.

16. Centre for disease control and prevention. Recommendation for post exposure prophylaxis (PEP) for exposure to HBV HCV and HIV. MMWR Morb Mortal wkly Rep 2001; 502:22.

17. Centre for disease control and prevention. Immunization adolescents recommendations of the advisory committee on immunization practices. American Academy of Pediatric, American family physicians and American Medial Association MMWR.1996, 45:1-14.

18. Barone P, Sciacca A, Lupo F, Leonard S, Murumeci S. Hepatitis B vaccination in young nurses of General Hospital. Ann Ig 1994; 7:251-5.

19. Hanrahan A, Reutter L, "A critical review of literature on sharp injuries. Epidemiology management of exposure and prevention. J Am Nurs 1997; 25:144-54

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PLACENTA PERCRETA- A RARE CATASTROPHE

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ABSTRACT

Objective *To document the clinical presentation, risk factors, management and management of placenta percreta.*

Design *Case series*

Place and Duration of Study: *A 5 year study from January 2001 to December 2005 in Gynaecology & Obstetrics department, Unit II, Jinnah Postgraduate Medical Centre, Karachi.*

Patient and Methods *This study included patients of placenta percreta who were either diagnosed on ultrasound during antenatal period or accidentally found at exploratory laparotomy or caesarean section.*

Results *A total of 11 cases of placenta percreta were managed during the study period. The frequency of the lesion was 1: 2058 deliveries. In 7 patients placenta had invaded and perforated the uterine wall, in 3 patients it had invaded the urinary bladder as well and in one patient there was broad ligament invasion. Most common risk factors were previous caesarean section (CS) in 91% cases and placenta previa (91%) followed by curettage (9%). Hysterectomy was performed in all patients. Partial cystectomy and bladder repair was done in those cases where urinary bladder was invaded. Urinary bladder injury occurred un two (27.27%) patients. Two patients died, one due to irreversible shock and other due to acute renal failure.*

Conclusion: *Placenta percreta is a rare catastrophe associated with high maternal morbidity and mortality. Early diagnosis and surgery following adequate resuscitation should be accomplished with multidisciplinary team.*

KEY WORDS:- *Antepartum haemorrhage, Placenta percreta, Haematuria in pregnancy.*

INTRODUCTION:

Placenta percreta is a rare obstetrical condition associated with potentially life threatening haemorrhage at the time of delivery. The incidence varies widely from 1:540 to as low as 1:93000 deliveries.[1-2] Placenta percreta was first reported by Alexandroff in 1900. Placenta percreta invading the urinary bladder was first reported by Ochshorn in 1969[4]. Clark in 1985[3] observed increased incidence of placenta previa / percreta after CS. Litwin et al[5] reported a case for the first time in which the diagnosis was made preoperatively before any intraperitoneal haemorrhage. Barki et al[6] successfully managed the case of placenta percreta with methotrexate after hysterectomy. Dubois[7] in 1996 did balloon occlusion and embolization of internal iliac artery to reduce

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intraperitoneal blood loss. O'Brian et al reported an association of elevated alpha fetoprotein with the extent of myometrial invasion[8].

Normally the placental chorionic tissue is separated from the myometrium by decidual plate which forms the physiological plane of cleavage at the time of birth. Sometimes placenta is morbidly adherent to the uterine wall. The mechanism for the abnormal implantation is thought to be thin, poorly formed decidua in the scarred area of the lower uterine segment that does not resist deep invasion by trophoblast. The abnormal implantation impedes complete separation of placenta following delivery resulting in severe post partum haemorrhage. There are three types of morbidly adherent placentae depending upon the degree of invasion, placenta accreta where chorionic villi are firmly adherent to the myometrium, placenta increta where they invade the myometrium, and placenta percreta where they penetrate the myometrium and invade the serosa of the uterus and may extend to the adjacent structures like urinary bladder[5]. Placenta percreta invading the urinary bladder is an extremely rare condition. It carries a very high morbidity and mortality due to bladder injury and profuse uncontrolled haemorrhage at the time of surgery[9].

The purpose of this study is to report our experience of management of the cases of placenta percreta.

PATIENTS AND METHODS:

The study is conducted in the Department of Obstetrics and Gynaecology Unit II, Jinnah Post Graduate Medical Center, Karachi from January 2001 to December 2005.Total number of deliveries registered during five year period were recorded. This study includes those patients of placenta percreta who were either diagnosed on ultrasound in the antenatal period or accidentally found at the time of caesarean section or during exploratory laparotomy for intraperitoneal haemorrhage.

RESULTS:

Total number of deliveries from 2001 to 2005 were 22644 and there were 11 cases of placenta percreta. The frequency is found out to be 1:2058 deliveries (0.048%).Out of 11 patients 7 had uterine wall invasion extending up to serosa, 3 had urinary bladder invasion and only one had broad ligament invasion.

There were seven cases of placenta percreta invading and perforating the uterine wall, among them three patients presented in a state of shock with acute abdomen and placenta perforating the uterus with intraperitoneal haemorrhage, while four patients presented with episodes of antepartum haemorrhage. Among seven patients, five had history of previous two caesarean sections, one had history of previous one caesarean section and one had history of dilatation and curettage. Six patients had placenta previa type IV and one had fundal placenta. All patients with placenta previa had lower segment placental perforation and the remaining one patient had fundal perforation.

All patients in this group were saved after radical surgery. Exploratory laparotomy and emergency obstetrical hysterectomy was done in those three cases of uterine wall invasion who had intraperitoneal haemorrhage. Elective caesarean section was followed by caesarean hysterectomy in two cases and in other two patients emergency caesarean hysterectomy was performed after emergency caesarean section. Three to 7 pints of blood were transfused in these patients before , during and after surgery. Their hospital stay ranged between 9 to 15 days.

There were three cases of placenta percreta invading the bladder wall and mortality in this group was significantly high in spite of preoperative diagnosis of bladder invasion Two patients out of 3 died, one due to acute renal failure and other because of irreversible shock, as a result of excessive haemorrhage at the time of operation. These two patients had frequent episodes of haematuria and sonographic evidence of bladder invasion was present prior to operation. In one of these patients cystoscopy was also done to confirm the diagnosis. One of these patients had classical caesarean section and LSCS was performed in other patient, both culminating in emergency hysterectomy, partial cystectomy and bladder repair. These patients expired in spite of all efforts.

The third patient who survived in this group presented with anti partum haemorrhage due to placenta previa and emergency caesarean hysterectomy was performed . During surgery urologist was also involved , and partial cystectomy and bladder repair was performed . During post operative period she had continuous haematuria that was dealt with conservatively by continuous bladder irrigation. She was discharged on 16th post operative day.

There was one case of broad ligament invasion in the study. She presented in emergency in a state of shock due to intraperitoneal haemorrhage. She had previous one caesarean section. Ultrasound confirmed the presence of placenta previa and exploratory laparotomy was planned. On opening the abdomen a cotyledon of placenta was protruding out through the anterior layer of broad ligament and a spurting blood vessel was seen. Approximately 5 pints of blood were removed from the peritoneal cavity and hysterectomy performed. She recovered and was discharged on 13th postoperative day. Two patients of placenta percreta died, one due to acute renal failure and other due to irreversible shock depicting a maternal mortality of 18.2% (table I).

TABLE -I	COMPLICATIONS
Complications	No. of Cases
Anaemia	8
Paralytic ileus	4
Febrile illness	3
Urinary bladder injury	3
Urinary Tract Infection	2
Shock	2
Acute Renal Failure	2
Haematuria	1
Ureteric ligation	1

DISCUSSION:

Placenta percreta is a life threatening condition due to risk of excessive bleeding[9] and carries a considerable risk of the patient losing her uterus[2]. In present study we found previous 1 - 3 caesarean section in 10 (91%) out of eleven patients and a similar number of patients (91%) had placenta previa and that placenta percreta has direct relation to placenta previa. Similar figures have been reported in local as well as international literature[9, 10]. One of 11 cases had fundal rupture of unscarred uterus during second trimester. Spontaneous rupture of unscarred uterus during second trimester is rare. Placenta percreta has been recognized as possible cause[11]. Microscopic haematuria associated with other clinical features should also alert the urologist for placental invasion of bladder[2]. Placenta percreta is associated with significant maternal morbidity and mortality due mainly to operative catastrophic hemorrhage and its consequences.

The optimal management of a patient with placenta percreta is complex and involves the simultaneous cooperation of members of a number of disciplines. This multidisciplinary team ideally be headed by an obstetrician and it is very important to have a very detailed plan before any elective surgery. An organized approach allows everyone to understand what to expect, what their particular contribution would be, and reduces the confusion when the surgery actually takes place.

Prenatal diagnosis of placenta percreta is important with the help of color and power Doppler ultrasound and MRI which clearly shows the extent and depth of affected area as well as other pelvic organ involvement. Traditional treatment of placenta percreta includes surgical procedures such as hysterectomy, partial cystectomy and hypogastric artery ligation. In the present series, we performed hysterectomy in all cases in addition to partial cystectomy and bladder repair that was done in cases of bladder invasion. In world literature successful conservative management of placenta percreta was also reported by Henrich who left placenta in situ after delivery and used methotrexate postoperatively[12]. Alkazaleh did elective postoperative uterine artery embolization with balloon catheterization to prevent post partum haemorrhage to promote involution and shedding of placenta[13]. Same has been reported by other authors. Bennich introduced a new surgical technique allowing the patient to keep her uterus[14]. Maternal mortality reported in literature is significantly high. Two deaths occurred out of 11 patients in our study.

REFERENCES:

1. Estella NM, Berry DL, Baker W, Wali AT, Belfort MA. Normovolemic hemodilution before caesarean hysterectomy for placenta percreta. Obstet Gynaecol 1997; 90:669-70.
2. Abbas F, Talati J, Wasti S, Gaffar S, Quershi R. Placenta percreta with
3. Clark SL, Koonings RP, Phelan JN et al. Placenta previa/accreta and prior caesarean section. Obstet Gynaecol 1985; 66: 89.
4. Ochshow A, Menahem PD, Soferman N. Placenta previa accrete. Obstet Gynaecol 1969; 33: 677-679
5. Litwin KR, Loughlin B. Placenta percreta invading urinary bladder. J Urol 1989; 64: 283-286
6. Barki YN, Rifai. Legarth J. Placenta previa percreta magnetic resonance imaging findings and methohexate therapy after hysterectomy. Am J Obstet Gynaecol. 1993; 169: 213-14
7. Dubois J, Garel L, Grignon A, Lemay M, Leduc L. Placenta percreta: Balloon occlusion and embolization of internal iliac arteries to reduce intraoperative blood losses. Am J Obstet Gynecol 1997; 196: 723-6
8. O' Brien JM, Barton JR, Donaldson ES. The management of Placenta percreta

   Conservative and operative strategies. Am J Obstet Gynaecol 1996; 175:1632.
9. Hundon L, Michael A, Broome DR. Diagnosis and management of placenta percreta: A review. Obstetrical and Gynaecological Survey 1998; 53: 509-17.
10. Finberg G, William J. Placenta accreta . Prospective sonographic diagnosis in patients with placenta previa and prior caesarean section. J Ultrasound Med. 1992; 11: 333-43
11 LeMaire NJ, Louisy C, Louisy K,Muschenheim F. Placenta percreta with spontaneous rupture of an unscarred uterus in 2nd trimester, Obstet Gynaecol 2001,98: 927-9.

12. Henrich W, Fuch SI, Ehrenstein T, Kjos S, Schmider A, Dudenhansen JW. Antenatal diagnosis of placenta percreta with planned in situ retention and methotrexate therapy in a women infected with HIV. Ultrasound Obstet Gynaecol 200 ; 20:90-3

13. Alkazaleh GM, Kingdom J, Kachura JR, Windrim R. Elective non removal of placenta and prophylactic uterine artery embolization postpartum as a diagnostic imaging approach further management of placenta percreta. J Obstet Gynaecol Can; 2004; 26: 743-6

14 Bennich G, Langholl-Roos J. PlacentaPercreta treated using a new Surgical technique. Euro J Obstet Gynaecol Repro.Bio 2005; 122:122-25

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MALIGNANCY IN NODULAR GOITRE

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ABSTRACT

Objective *To highlight diagnostic difficulties and evaluate the outcome of malignancy in nodular goiter.*

Setting: *This study was conducted in the Surgical Unit-III and Unit-IV at Liaquat University Hospital, Jamshoro, from January 2001 to December 2004.*

Study Design; *Case series*

Patient and Methods *Nodular goiter patients admitted for treatment were studied with the help of a pre-designed proforma for recording the personal history, blood chemistry and FNAC results. The results of FNACs were further compared with the tissue histology postoperatively.*

Results *During the four year study period 14 patients had malignancy out of total 149 cases of nodular goiter admitted. Twelve patients were diagnosed on FNAC. These patients were operated and near total thyroidectomy was done. Two patients diagnosed to have carcinoma on tissue biopsy (FNAC did not pick the malignancy) were re-admitted and had near total thyroidectomy One patient with lymphoma was referred to Department of Oncology for radiotherapy. All patients with neoplasm postoperatively were referred to oncology department for further management to suppress the TSH.*

Conclusion: *Near total thyroidectomy is the surgery of choice to decrease the recurrence rate in thyroid malignancies.*

KEY WORDS:- *Nodular goitre, Malignancy, FNAC, Thyroidectomy.*

INTRODUCTION

Nodular thyroid is a common neck swelling. Thyroid cancer is an uncommon tumour and represents about 1-2% of all malignancies[1,2]. It is more common in females. Well differentiated papillary carcinoma (80%) is more common than follicular carcinoma (10%). The aim of this study was to evaluate the outcomes of malignancy in nodular goitre and diagnostic difficulties with optimal form of surgery in order to avoid repeat surgery in the form of recurrence.

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PATIENTS AND METHODS

The data of the patients with nodular goitres managed at Surgical Unit-III and Surgical Unit-IV at Liaquat University Hospital, Jamshoro from January 2001 to December 2004 were evaluated. Age, sex, geographical distribution, clinical features were entered into a proforma. Thyroid scan, thyroid function tests and ultrasound were carried out in all the patients. FNAC was carried out in all the cases with cold nodule on thyroid scan and final diagnosis was based on tissue biopsies. Blood CP, LFTs, x ray chest, abdominal ultrasound were also done.

FNAC was performed with single puncture and multiple passes. The diagnosis was classed as colloid, follicular, Hurthle's cell proliferation, inadequate, haemorrhagic, suggestive of malignancy (positive result) and other diagnosis (negative result). These were compared to those of the final histological studies in order to calculate the value of the test in diagnosis.

Surgical options varied depending upon the benign and malignant nodules. Lobectomy with isthmusectomy or lobectomy was carried out in all the benign nodules. For malignancies near total thyroidectomy was done. All patients received postoperative radioactive iodine in order to suppress TSH hormone.

RESULTS

One-hundred and forty-nine cases of nodular thyroid were admitted in Surgical Unit-III and Surgical Unit-IV, Liaquat University Hospital, Jamshoro. One case of papillary carcinoma found in a patient under 18 years of age with no local or distant spread. Fourteen (9.4%) patients had neoplasia at the final diagnosis. FNAC was done in all nodular goiters and was compared to the final histological report. FNAC suggested malignancy in 12 cases, while 2 cases on final H & E excision sample were also found malignant. So diagnosis was missed in two cases on FNAC.

Two patients diagnosed to have carcinoma on tissue biopsy were re-admitted to have near total thyroidectomy. All 12 patients with positive neoplasic report on FNAC were operated and near total thyroidectomy was done. One patient of lymphoma was referred to Department of Oncology for radiotherapy. (Table-I)

Mean postoperative hospital stay was 4 to 7 days. Atelectasis and tetany were the main postoperative complications in the early postoperative days. Wound infection was rare. Airway obstruction due to oedema or haematoma was not seen in our study. Two patients had partial recurrent nerve palsy. Voice changes noted in 5 patients, who became normal over 2 months while one patient did not come for follow up. All patients with neoplasm were referred to oncology for further management to suppress the TSH.

TABLE -I **TYPE OF MALIGNANCY N 14**

Pathological form	No
Well differentiated	
Papillary	7
Follicular	4
Undifferentiated	
Anaplastic	2
Lymphoma	1

DISCUSSION

Nodular goitre may be caused by adenoma, carcinoma or occasionally thyroiditis. Thyroid nodules occur most commonly in 30-50 years old patients. Thyroid cancer is an uncommon tumour and represents only about 1% of all malignancies, however it is the most common endocrine tumour which is also comparable to our study[3,4]. There were 10% malignancies in thyroid nodule. Because of necessity to exclude malignancy they therefore represent a significant diagnostic problem.

In our study majority 7 (50%) of the thyroid malignancies were of papillary type, which were slightly lower as compared to other studies.[5-7] It was more common in young patients of 30-40 years of age. Follicular carcinoma was found in 4 (28.59%) patients of older age group. The anaplastic carcinoma found in 2 cases of 70 years of age and was compatible to Western studies.[3] Lymphoma found in one patient.

In papillary and follicular carcinomas, near total thyroidectmy was carried out. Two (1.34%) patients who had negative FNAC and underwent lobectomy and isthmectomy, were re-operated for near total thyroidectomy after tissue biopsies confirmed malignancies. The recurrence was slightly more in follicular adenoma on negative FNAC where lobectomy was done. The factors which influenced the outcome of surgery were the age of patient, vascularity of the tumour, associated concomitant systemic illness and experience of surgeon.

REFERENCES

1. Young AE. Goitre. Surgery (Int) 1999; 44:1-7.
2. Thomas WEG. Neoplasms of the thyroid gland (including the solitary nodule). Surgery (Int) 2004; 64:296-300.
3. Sheppard MC. Goitre and thyroid cancer. Medicine (Int) 1997; 11:28-30.
4. Young T. Thyroid neoplasms and the solitary nodule. Surgery (Int) 2001; 55:218-22.
5. Tonjes A, Paschke R. Diagnosis and therapy of thyroid nodules. Internist (Berl) 2005; 46:565-72.
6. Khairy GA. Solitary thyroid nodule: the risk of cancer and the extent of surgical therapy. East Afr Med J 2004; 81:459-62.
7. Fernandes JK, Day TA, Richardson MS, Sharma AK. Overview of the management of differentiated thyroid cancer. Curr Treat Options Oncol 2005; 6:47-7.

REFRACTIVE STATE OF CHILDREN IN LESS THAN FIVE YEARS OF AGE

SEEMA QAYYUM

ABSTRACT

Objective *To assess the refractive errors and related visual impairment in pre-school children attending the outdoor clinic.*

Study Design: *Descriptive study*

Place and Duration of study: *Department of Pediatric Ophthalmology at The Children's Hospital and Institute of Child Health Lahore, from January 2005 to December 2005*

Patient and Methods *Children aged 1-5 years attending the outdoor clinic were included in the study.The examination included visual acuity measurements, ocular motility evaluation and retinoscopy under cycloplegia, and examination of the anterior segment, media, and fundus. Myopia was defined as spherical equivalent refractive error of at least -0.50 D and hyperopia as +2.00 D or more.*

Results *A total of 410 children under the age of 5 years were examined for the refractive state of the eye.143 (34.8%) were hypermetropic, 104 (25.3%) were myopic, 5.1% had hypermetropic astigmatism whereas 8.2% had myopic astigmatism. 106 (25.8%) children had emmetropia.*

Conclusion: *Refractive errors are a significant cause of decrease vision in pre-school children and if timely intervention is not done may lead to visual deficit in the years to come. Early screening of refractive state of the eye should be included in the preliminary pediatric examination and should be repeated in the following years of childhood.*

KEY WORDS:- *Child, Refractive errors, Myopia, Hyperopia.*

INTRODUCTION:

Vision is one of the biggest wealth of human beings. Via the eyes we receive 9/10 of the information of the surrounding world. Therefore it is necessary to provide ideal conditions for harmonic development of eyes in the organism growth period to create excellent visual functions. Normal visual development requires that a focused image form in each eye that can be fused by the brain into a single image. Any problem that interferes with a focused, fusible image during the first 8 to 10 years of life is capable of causing amblyopia. The most common causes of amblyopia include strabismus, uncorrected refractive error and deprivation[1,2].

The normal condition of the eye, in which, with no accommodation, parallel light is focused on the retina, is called emmetropia. Any optical departure from this condition is called a refractive error or ametropia. There are three kinds of refractive errors, namely myopia, hyperopia and astigmatism[3,4]. A refractive error is not

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considered as a disease, unless it is the magnification of a structural abnormality, as in some cases of high myopia and astigmatism. A refractive error is determined by two factors, the refractive power of the cornea and the lens and the length of the eye.

Reduction of vision in childhood is noticed most often in children with refraction abnormalities namely myopia, hypermetropia, astigmatism. Usually the children with reduced vision, which is not corrected, are nervous, forgetful and their marks in school are lower. In case of myopia, they read and watch TV at close distance. They see clearly at close distance but do not see well far, improving their vision to a certain extend by squinting. The following complaints are specific for children with hypermetropia: headache, pain in temple, vertigo. Erythema and formation of flakes on eyelash ends in such children are not rare. Often repeating hordeolum could be due to uncorrected hypermetropia. There could be also hidden" hypermetropia. In children with normal vision but with some of the above complaints, at pupil dilatation, it could be big diopter of hypermetropia even up to 4-5 years. Existence of astigmatism yields almost the same complaints. If the children have some of the above complaints, it is a sufficient reason to be brought immediately to ophthalmologist. Timely identification of the problem will help in tackling these issues thus helping child to have normal schooling.

The objective of this hospital based study was to identify type of refractive errors in children under 5 years of age.

PATIENTS AND METHODS:

This is a hospital based study with randomized selection of patients less than five years of age attending the outdoor clinic of the Department of Pediatric Ophthalmology of The Children's Hospital and Institute of Child Health Lahore, from January 2005 to December 2005. A total of 410 patients were included in the study. Patients having any associated ocular problem were excluded.

A detailed examination was done. Presence or absence of nystagmus was noted. Assessment of visual acuity was done by noting the fixation and following movements, CSM and response to occlusion of eye. Children three to four years of age, i.e. verbal children were capable of recognition and acuity measurement was done using charts with pictures, figures or letters. Acuity was evaluated with each eye separately. Eye alignment was assessed most easily by observation of the corneal light reflex.

A note of pupillary reflex was made. Slit lamp examination was done to rule out any anterior segment pathology. Dilated fundus examination with direct ophthalmoscope was also done.

RESULTS:

The study found that of 410 children 104 (25.3%) were myopic, 106 (25.8%) had a normal childhood refraction and 143 (34.8%) were hypermetropic (greater than +2.00 Diopters). Twenty one children (5.1%) had hypermetropic astigmatism whereas 34 (8.2%) had myopic astigmatism (table 1). Out of 410 children 243 were male and 167 female. 149 (36.3%) children had an associated problem of strabismus. Nystagmus was present in 31 (7.5%) children. Tthese patients had a developmental delay and were referred from the department of Developmental Paediatrics.

TABLE -I REFRACTIVE STATE OF EYE

Refractive state of eye	Number of children	Percentage
hypermetropia	143	(34.8%)
Hypermetropic astigmatism	21	(5.1%)
myopia	104	(25.3%)
Myopic astigmatism	34	(8.2%)
emmetropia	106	(25.8%)

DISCUSSION:

Normal visual development is rapid during the first six months of life and continues through the first decade. Young children are uniquely sensitive to conditions that interfere with vision and visual development. Amblyopia, or functionally defective development of the central visual system, may be caused by common vision problems such as strabismus, uncorrected refractive errors and deprivation secondary to occlusion[5]. When detected early, refractive errors and many other childhood vision abnormalities are treatable, but the potential for correction and normal visual development is inversely related to age. Since many affected children are asymptomatic, early detection of abnormal visual function requires effective screening throughout early childhood.

Estimates of the number of people worldwide with refractive error range from about 800 million to 2.3 billion. The vast majority of these could have their sight restored by spectacles, but only 1.8 billion people have access to eye examinations and affordable correction. This leaves approximately 500 million people, mostly in developing countries (close to 1/3 are in Africa) and many children,

with uncorrected error causing blindness and Impaired vision[6].

The study was conducted with the view of detecting refractive errors at an early stage so that early management by giving glasses may prevent the development of life long visual deficit. In our study (25.8%) of children were found to be emmetropic which is in accordance with earlier studies. 34.8% of patients suffered from hypermetropia , in a study conducted in Brazil[7] positive degree ametropia (hyperopia and hyperopic astigmatism) were more frequent (46.25%) in our study 104 (25.3%) children were found to be myopic and 8.2% had myopic astigmatism. It is in accordance with the above study[8] which showed negative degree ametropia (myopia and myopic astigmatism) (21.17%), and by mixed astigmatisms (20.19%). An other reported a high prevalence of hyperopic errors (hyperopia or hyperopic astismatism), occurring in 73.6% of the ametropic cases[9] which is quite similar to our observation. There was also an increased incidence of strabismus i.e. 149 (36.3%) children, with esotropia being more predominant. This is in accordance with earlier studies (7.5%) where children had nystagmus and showed a poor vision as indicated by poor fixation and following movement[10]. These patients had an associated developmental delay. As theses patients are already deprived so it is essential that their vision should not be comprised and should be detected and managed by appropriate measures.

CONCLUSIONS.

in our study a large number of children were found suffering from significant refractive errors. When detected early, refractive errors and many other childhood vision abnormalities are treatable, but the potential for correction and normal visual development is inversely related to age. Since many affected children are asymptomatic. It is recommended that there should be a focus on primary care vision-screening for early detection, referral, and treatment.

REFERENCES:

1) Nelson HD, Nygren P, Huffman L, Wheeler D, Hamilton A, Teutsch S, et al. Screening for visual impairment in children younger than age 5 years: update of the evidence from randomized controlled trials, 1999-2003. Rockville, Md.: Agency for Healthcare Research and Quality, 2004. Accessed online October 19, 2004, at: http://www.ahrq. gov/ clinic/ 3rduspstf/ visionscr/ vischup.htm.

2) Packwood EA, Cruz OA, Rychwalski PJ, Keech RV. The psychosocial effects of amblyopia study. J AAPOS 1999;3:15-7.

3. Parr J. Introduction to Ophthalmology, 3rd ed. Oxford Medical publications. Dunedin, New Zealand, 1989;44-45.

4. Waddell K. Spherical refraction for general eye workers. J Comm Eye health 2000; 13:6-7.

5. Holden BA, Sulaiman S, Knok K. The challenge of providing spectacles in the developing world. J Comm. Eye health 2000;13:9-10.

6. Taylor HR. Refractive errors: magnitude of the need. J comm. eye health 2000; 13:1.2.

7. Murthy G.V.S. Vision testing for refractive errors in schools. J Comm Eye Health 2000; 3: 3-4.

8. Rodriguez MA, Castro-Gonzales M. Visual health of schoolchildren in Medellin, Antioquia, Colombia. Bol Sanit Panam 1995; 119:11-4.

9. Sherman A. A review of visual screening of schoolchildren. Br J Physiol Opt 1972; 27:29-42.

10 Arq. Bras. Prevalence of refractive errors and ocular disorders in preschool and school children of Ibiporã - PR, Brazil (1989 to 1996) Oftalmol. 2001;.64: 45-8.

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EXPERIENCE OF KARADYKIS PROCEDURE IN THE TREATMENT OF PILONIDAL SINUS.

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ABSTRACT

Objective *To evaluate the advantages of karydakis procedure for the treatment of the pilonidal sinus*

Study Design: *Interventional study*

Place and Duration *The study was conducted in surgical unit 1(ward 3), Jinnah Post Graduate Medical Center, Karachi from January 2001 to December 2004.*

Patient and Methods *In this study we enrolled 100 adult patients who presented with pilonidal sinus. All the patients where evaluated by through history, physical examination and were investigated before undergoing primary asymmetrical closure of pilonidal sinus by a procedure describe by Karadykis.*

Results *In this study average age of patients was 28 years. Male female ratio was 10:1. Most of the patients were hairy 81% and over weight 85%. Single sinus opening present in the midline of natal cleft in 69% patients. Results showed uneventful recovery in 93% patients, postoperative wound infection in four patients 4%, seroma formation and recurrence in three patient 3%. Average hospital stay was 4 days.*

Conclusion: *Experience of karydakis procedure in the treatment of pilonidal sinus is worth adopting and sharing with others, with all its advantages, as with this procedure patient has short hospital stay, early wound healing and less postoperative complications.*

KEY WORDS:- *Karydakis, pilonidal sinus, primary closure of pilonidal sinus.*

INTRODUCTION

Pilonidal is a Greek word meaning nest of hairs. It is mostly found in young hairy population in the cleft between buttocks esp. in drivers (called jeep bottom), inter digital skin of hands esp. barbers, umbilicus, axilla and pubis[1,2]. Its presentation can vary from cyst, abscess, acute and chronic sinus unhealed or recurrent disease.

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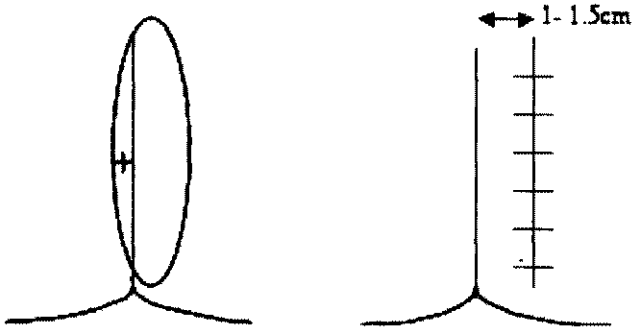
Various causative factors have been reported but the major factor, which was identified by most, is HAIR[7]. There are various surgical options discussed for pilonidal sinus, which include marsupilization, sauccerization, excision, primary closure and secondary closure[3,7]. Whatever the surgical option used it should give better results of cure with low recurrence of disease, short hospital stay, early wound healing and early back to work. Karydakis procedure[4,7] (primary closure by rotational/ advancing flap) described by Karydakis in 1973 in which elliptical incision is made with mobilization of a flap from the medial side of the wound, advanced towards the lateral side, sutured to the sacrococcygeal fascia and

wound closed asymmetrically. This technique avoids midline wound and scan. He him self reported this procedure in 7471 patients and recurrence rate was less than 1%.



PATIENTS AND METHOD

100 adult patients above 12 years of age were selected who presented for the first time with pilonidal sinus out with acute pilonidal abscess or recurrence in the out patient department of surgical unit 1 ward 3 of Jinnah Postgraduate Medical Center Karachi, from January 2001 to December 2004.

Complete history was documented that included detailed information about the disease and patients comorbids. Physical examination conducted noting the hair distribution, built / stature, number of sinuses and there relationship to midline beside a detailed systemic review. Investigations were carried out which include blood complete picture, blood sugar, urea & creatinine. Sinogram and x-ray lumbosacral spine (where needed).
All the patients were admitted a day before surgery. Operations perform were in left lateral position in most of the patients but in some patients operation was done in jack knife position due to low position of the sinus. Sinuses were injected with few ml of methylene blue than elliptical incision was made followed by limited excision of the subcutaneous tissue, thus raising a skin flap mobilized from the medial side of the wound and excising all the sinus track up to the sacral perostium. The subcutaneous tissue of mobilized flap were sutured to the sacrococcygeal fascia by vicryl 2/0 and skin closed with silk 2/0, 1 – 1.5 cm lateral to midline. In 16 patients we kept the closed suction drain as they had large flaps. Pressure dressing were done.

Dressing removed on 2nd day and patient given warm sitz bath twice a day. Those who had drain, drains were removed within 48 hr. most patients were discharge on 3rd day without any complication. Patients who developed wound infection were treated with twice daily dressing and intravenous antibiotics (metranidazole and fisrt generation cephlosporin) after sending the discharge for culture and sensitivity. Most wounds healed by 10 –12 postoperative days.

All the uncomplicated patients were called on 9th postoperative day for stitch removal. All the patients were followed in out patient department weekly in the first month and fortnightly for three months.

RESULTS

100 patients with pilonidal sinus admitted to surgical unit 3 Jinnah Postgraduate Medical Center Karachi through Out Patient Depatment.

These patients underwent primary closure of their sinuses after excision through the technique described by Karydakis[4].

Age group ranged from 16 to 40 years and mean age was 27.8 years. Male female ratio was 88 / 12. eighty one (81%) patients were hairy and almost half of them had abundant local hairs in the natal cleft. Eighty five (85%) patients out of 100 were over weight, most of these were grade 1 obesity according to WHO classification. Sixty nine (69%) patients had only single sinus opening and most of them were either in midline or within 1cm of midline. 93 patients 93% had uneventful course of treatment while there were 4 cases of post operative infection 4%, two of them had stitch, two had superficial wound infection and three had seroma formation postoperatively due to large size flap which was closed without drain, it resulted in the only failure and had 3% recurrence 3%. Uncomplicated cases were discharged on 3rd day, where as those cases with complications remained in the ward for 8-9 days and the mean hospital stay was 4.3 days.

Most uncomplicated wounds healed by the tenth day of surgery, while complicated wounds healed by the end of second week, average healing time was 11.2 days.

Patients were able to return to normal activity day after removal of the stitch but patient was advised to avoid strenuous work for couple of weeks.

DISCUSSION

Pilonidal sinus of the natal cleft is a chronic recurring condition, which is difficult to treat. Its treatment causes a burden on the hospital and community resources. The management of pilonidal sinus is of critical importance to the practicing surgeons as well as to the patients. The optimal treatment of pilonidal sinus disease should result in a minimum recurrence rate and a short post operative convalescence.

Pilonidal disease of the natal cleft is a disease of young adult population mainly affecting those in the third and

fourth decades of life. It is predominantly seen in hairy males who are over weight.

In this study of one hundred patients males predominated 88% as compared with international literature, the possible reason being social setup, where such diseases of perineal region accounts to social stigma if and when they effect the female population.

Many methods for the treatment of pilonidal sinus have been described by various authorities, ranging from conservative to lying open the sinus track to primary closure to musculocutenous and skin falps[3,5]. However the optimum treatment still remains a topic of debate. In this study all patients were treated by karydakis technique of primary closure.

The reason for adopting karydakis technique in the treatment on natal cleft pilonidal sinus is early recovery, mobilization, short healing time and early return to normal activity. Reduce rate of infection and therefore low recurrence rate.

As seen in this study four cases had infection, three had seroma formation and recurrence.

Complication rate in this study was 7% with recurrence of 3%. Karydakis original study shows recurrence of less than 1% but in other studies recurrence ranges from 0% to 6% [4,8]. Result of this study is compatible with national and international studies. William reported a series of 31 patients, 29 out of them were infection free, only 2 of them had infection and no recurrence[10]. Kulacoglu in turkey perform karydakis flap in 14 patients and only one patient developed seroma. Neither early failure in wound healing nor recurrence[6]. Serous F et al included 34 patients for primary closure of pilonidal sinus , 30 patients had uneventfull recovery, 3 patients had wound infection and no recurrence[11]. Z A Choudhri presented 25 cases of pilonidal disease 18 of them had no infection, seven had stitch abscess and hematome formation in 3 patients. In study of 112 patients by Akinci et al 2 patients had wound infection, 3 had collection and one recurrence[9].

CONCLUSION

Kardakis procedure is safe effective in term of early mobilization, healing time, short hospital stay, low rate of infection and recurrence. Kardakis procedure is worth adopting and sharing with others.

REFERENCES

1. Patel M.R.bassini-L, Nashad R, Anselmo M.T, Barder's inter digital pilonidal sinus. A foreign body granuloma. J-Hand- Surg Am. 1990 15(4); 652-5.
2. Core MI, Cutaneous condition in colon and rectal surgery ed.3. Philadelphia, JB Lippincott 1993 374-435.
3. Surell JA. Pilonidal disease. Surg Clin North Am 1994 74:1309-1315.
4. Anyan WAC, Husain A, Williams A. Montgomery AC. Karydakis operation for sacrococcygal pilonidal sinus disease experienced in a district hospital, Ann R Coll Surg. Engl.1998;80:197-99.
5. Dorton HE, Conservative treatment of pilonidal disease. Aforeign body granuloma process. Am Surg 1970; 36: 349-51.
6. Kulacoglu H, Dener C, Tumer H, Aktimur R. Colorectal Dis. 2006 Feb;8(2):120-3.
7. Chintapatla S, Safarani N, Kumar S, Haboubi N. Tech Coloproctol. 2003 Apr;7(1):3-8
8. Bukhari AJ;treatment of pilonidal sinus. Comparison of primary closure Karydakis, wide excision.Annal 2003, 9 2
9. Akinic OF, Coldun A, Uzunkoy A. Dis Colon Rectum. 2000,43;701-7.
10. Williams RS.Ann Rcoll Surg. Engl 1990 72;313-15
11. Sumekh SF, Gorenstein KB. Peadiatric Surgery Ind 2002 18;159-160.
12. Choudhri ZA; Primary closure after pilonidal sinus excision Annals 1993:3.

GIANT CELL TUMOR OF FIRST METACARPAL

SYED ARSALAN HAIDER BUKHARI

ABSTRACT

Giant cell tumor (GCT) or osteoclastoma is a locally aggressive tumor with an inclination for local recurrence. 85-90% of cases occur in the long bones, whereas only 2% of cases occur in the hand, and here too, metacarpal involvement is a rare occurrence with only few cases reported in the literature so far. A case of GCT of 1st metacarpal in a 28-year-old female is presented in this case report.

KEY WORDS:- *Giant cell tumor, Metacarpal, Bone tumor*

INTRODUCTION:

A variety of tumors or tumorous conditions occur in the hand, but majority are usually benign[1]. As the hand has a restricted free space and an exquisite sensitivity, even very small, histologically innocent masses can cause pain, loss of function or significant swelling. Malignant neoplasms in the hand that arise from tissues other than skin are rare. Giant cell tumor Is a benign tumor which however is locally aggressive and has a tendency for local recurrence.

Giant cell tumors form about 4-5% of all primary bone tumors. 80% of the patients are above the age of 18 years and there is a distinct female preponderance, the ratio ranging from 1:3 to 1:6. Majority of the cases occur in the long bones. Only 3% of giant cell tumors occur in the hand and a metacarpal involvement is much less common than phalanges[2,3].

CASE REPORT

A 28-year-old female, presented with the complaints of increasing pain and deforming swelling of her right thumb just of two months duration. The swelling had progressively increased in size and there was a gross restriction of movements of the affected thumb. There was no history of trauma or any constitutional symptoms. On physical examination, there was a localized swelling over the right first metacarpal with variable consistency. The overlying skin was free and the movements of both the first metacarpophalangeal and the trapeziometacarpal joints were painful and restricted.

Radiological evaluation revealed an expansile osteolytic lesion of the first metacarpal, involving the articular surface of the trapeziometacarpal joint. These features were reminiscent of a giant cell tumor and therefore fine needle aspiration cytology was carried out which confirmed the diagnosis. Excision of the lesion along with a reconstructive surgery comprising of, fusion of the trapeziometacarpal and metacarpophalangeal joint was planned. Per operatively, the tumor was of brown cheesy appearance and had also involved the soft tissues around it. The tumor was carefully removed with a cuff of normal tissue and the proximal and distal joints inspected. A tricortical ipsilateral iliac crest graft was taken and was inserted into the troughs created in trapezium and proximal phalanx and augmented with K-wire fixation both proximally and distally. A thumb spica was applied for 10 weeks post operatively and then mobilized.

Histopathological examination of the tumor showed a well vascularized, highly cellular tissue consisting of stromal mononuclear cells predominantly round to oval with foci of spindling and multinucleated giant cells present in close association with each other, thereby confirming the diagnosis of GCT. Reactive bone formation with osteoblastic rimming was also seen in some areas. At 7 months and 11 months follow-up, the graft was well taken and there were no signs of recurrence of the lesion, both clinically and radiologically.

DISCUSSION

Giant cell tumor of the bone is a relatively rare tumor composed of connective tissue stromal cells having the

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capacity to recruit and interact with multinucleated giant cells that exhibit the phenotypic features of osteoclasts [2]. The precise histogenesis of the tumor is not known.

Giant cell tumor predominantly occurs in the long bones in 75-90% of the cases [3]. Giant cell tumors of the bones of the hand are rare accounting for only 2% of cases. GCT of the hand seems to represent a different lesion than conventional GCT in the rest of the skeleton. Patients with a diagnosis of giant cell tumor of bone occurring in the hand and seen at the Mayo Clinic during a 50-year period were reviewed to assess the distribution of lesions. There were 5 lesions in the phalanges, 7 in the metacarpals, and 1 in the scaphoid[4].There is an 18% incidence of multicentric foci indicating that a bone scan should be a part of routine workup of these tumor[5]. Overall they appear in a younger age group and recur more rapidly in the hand than they do in other locations. They also have a shorter duration of symptoms averaging six months or less before a diagnosis is made. Despite the fact the GCT is not a sarcoma, the extent of tumor at the time of diagnosis and the high recurrence rate following limited resection often dictate the need of an enbloc resection through normal tissues to prevent local recurrence of the lesion. Such a treatment creates a significant skeletal defect and a challenging reconstructive problem. Reconstruction of the hand after enbloc excision is particularly difficult because of the need to restore the joint surface as well as bone and because of the dysfunction associated with post operative scarring[6].

The various treatment modalities described in literature are curettage, curettage and bone grafting, irradiation, amputation, and resection with reconstruction. Giant cell tumors are aggressive lesions, albeit benign. Lesions in the hand, especially those arising from metacarpals require resection with adequate margins and definitive structural reconstructions to ensure preservation of hand architecture, function and cosmesis. Almost all the described reconstructive procedures require a stump of tumour free metacarpal base after resection, for reconstruction of the metacarpal. In many centers replacement of the entire metacarpal with a silastic prosthesis has been carried out even in case of giant cell tumour involving the entire metacarpal head and shaft to within 7 mm of the base[7].

Local resection of the involved metacarpal with autograft or allograft replacement is the preferred surgical treatment[8] for several reasons. First, no correlation has been found between the grade of giant cell tumor and the rate of recurrence. Therefore all giant tumors of the hand should be considered locally aggressive. In addition curettage with or without bone grafts has resulted in recurrence rates of about 90%. Thus curettage is an unacceptable form of treatment. Second, although amputation may prevent recurrence, it is cosmetically deforming and decreases the function of the hand. Third, it is feared that multiple surgical procedures may increase the chances of converting a benign tumor into a more malignant one, thus a definite procedure should be done initially.

The metacarpophalangeal joint reconstruction can be achieved by metatarsal substitution, a combined iliac crest and metatarsal head graft and prosthetic replacement[8,9]. However, in our case, because of the low functional demands of the patient and the fact that the shortest metatarsal was longer than the involved metacarpal, we performed a local resection followed by reconstruction using a tricortical iliac crest graft fusing both the proximal and distal joints. In cases where possible depending on the disposition of the tumor, reconstruction preserving the central column and metacarpophalangeal joint is attempted using autologous iliac crest bone as a spacer and structural support. The fibro-osseous cartilage portion of the iliac graft is used as a "hemi-joint" replacement. By using a bridging bone graft and screw to fuse the adjacent proximal phalanges of the middle and index fingers, a stable "internal syndactyly" can be achieved[10]. At some centers grade III giant cell tumour was excised and reconstructed by a free fibular graft with gratifying results[11].

REFERENCES

1. Goldenberg RR, Campbell CJ, Bonfiglio M. Giant cell tumor of bone. An analysis of 218 cases. J Bone Joint Surg [Am] 1970; 52:619-64

2. Patradul A, Kitidumrongsook P, Parkpian V, Ngarmukos C. Allograft replacement in giant cell tumour of the hand. Hand Surg. 2001;6:59-65.

3. Averill RM, Smith RJ, Campbell CJ. Giant cell tumors of the bones of hand. J Hand Surg 1980; 5:39-50.

4. Meals RA, Mirra MJ, Bernstein AJ. Giant cell tumor of metacarpal treated by cryosurgery. J Hand Surg 1989; 14A:130-4.

5. Dahlin DC, Cupps RE, Johnson EW Jr. Giant cell tumor. A study of 195 cases. Cancer 1970; 25:1061-70.

6. Kettlekamp DB, Rampsey P. Experimental and clinical autogenous distal metacarpal reconstruction. Clinical Orthopedics 1971; 74:129.

7. Dingles WR, Rolle HJ. Case Report of a Giant cell tumor of the second metacarpal bone and implantation of a cement prosthesis. Hand Chirurgie 1979; 11:251.

8. Abdu WA .Giant cell tumors of the bones of the hand. J Hand Surg [Am]. 1997;22:91-8.

9. . Athanasian EA, Bishop AT, Amadio PC. Autogenous fibular graft and silicone implant arthroplasty following resection of giant cell tumor of the metacarpal: a report of two cases. J Hand Surg [Am]. 1997; 22: 504-7

10. Lee JY, Pho RW, Yo DS .Central column reconstruction following total resection of a third metacarpal giant cell tumour.J Hand Surg [Br]. 2005; 30:650-5.

11. Basit A,Zubari A,Rehman AZ .Giant cell tumour of the first metacarpal.J Coll Physicians Surg Pakistan. 2004;14:374-5.

TUBEROUS SCLEROSIS: REPORT OF TWO CASES DIAGNOSED BY COMPUTER-ASSISTED CRANIAL TOMOGRAPHY WITHOUT CUTANEOUS MANIFESTATIONS

MUHAMMAD UMAR AMIN, ABDUL GHAFFAR,SHAHID MAJEED

ABSTRACT

We represent two patients suffering from tuberous sclerosis without cutaneous manifestations. Both were diagnosed on cranial CT scan. Both had typical calcified ependymal lesions. Our first patient had bilateral renal angiomyolipomas as well.Second patient had typical calcified ependymal lesions near foraman of Monro and calcified left cerebellar tubers .

KEY WORDS:- *CT scan, Calcified, Cortical, Ependymal*

INTRODUCTION:

Tuberous sclerosis (TS) is an autosomal dominant neurocutaneous syndrome. The disease has a wide clinical spectrum varying from severe mental retardation to normal intelligence[1]. Hamartomatous tumors and malformations that occur in many organs, chiefly the brain, kidney, lung, skin, and heart, characterize the syndrome. Skin manifestations of tuberous sclerosis are seen in 70-80% of cases.

The diagnosis is established on head CT scan or an MRI. In most cases show calcified tubers in periventricular region and cortical hypodensities. Molecular studies are beneficial in identifying familial cases for a definitive prenatal diagnosis.

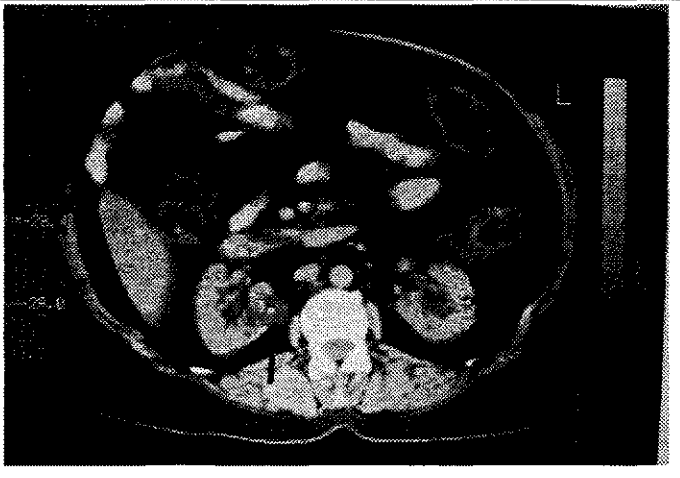
Diagnosis of TS should be suspected in all cases of infantile spasms. Ultrasound of kidneys should be performed in search for angiomyolipomas. Retinal, cardiac, renal and chest lesions should also be looked for in each case.[2]

CASE REPORT

Patient 1

A 60 years old male presented with abdominal pain. His CT scan abdomen revealed bilateral small renal masses (figure I). These masses were cortical based and hypodense. CT density of these lesions was 28, typical for fat confirming these masses to be angiomyolipomas. Suspecting tuberous sclerosis, he was referred to dermatology dept for detailed skin examination but no cutaneous manifestation found . His x-ray chest was normal. CT Scan brain was performed (figures- II,III). It revealed two periventricular calcified lesions. One was seen in left occipital horn at the level of calcified choroids plexus. The other calcified periventricular lesion was seen in ependyma of the body of right lateral ventricle. No other cranial manifestation of tuberous sclerosis was found. Presence of bilateral renal angiomyolipomas and calcified periventricular lesions were sufficient evidence of tuberous sclerosis. His echocardiography was also normal.

FIGURE I BILATERAL ANGIOMYOLIPOMAS SEEN IN BOTH KIDNEYS (ARROWS) .NOTICE NEGATIVE CT NUMBER _ -28(TYPICAL FOR FAT.)



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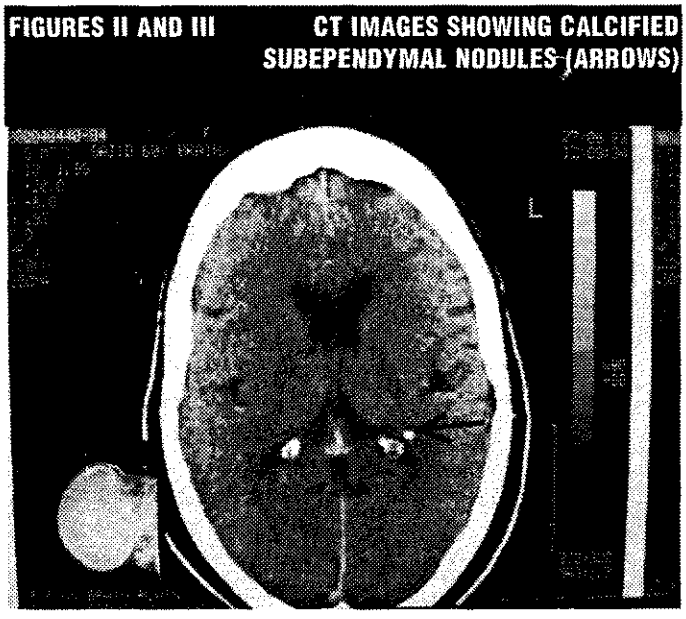

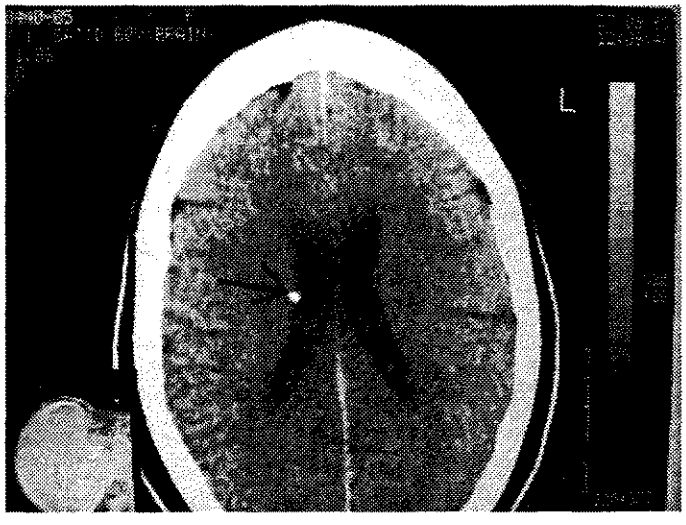

FIGURES II AND III CT IMAGES SHOWING CALCIFIED SUBEPENDYMAL NODULES (ARROWS)

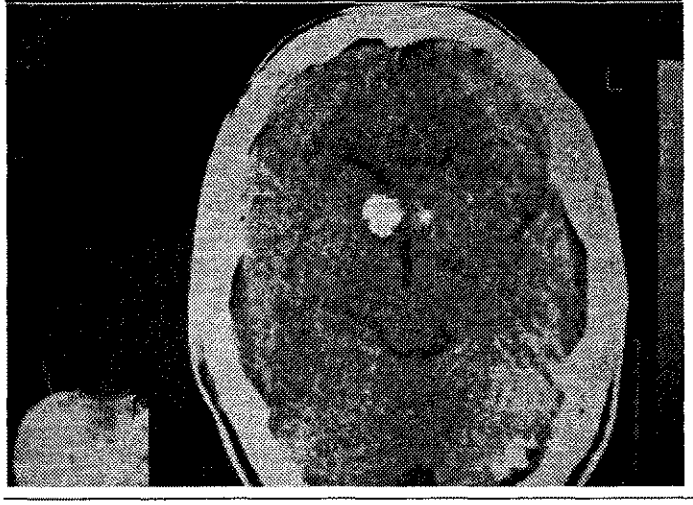

FIGURE IV A CT IMAGE SHOWING CALCIFIED SUBEPENDYMAL NODULES NEAR FORAMAN OF MONRO(ARROWS). AND CALCIFIED TUBER IN LEFT CEREBELLAR HEMISPHERE(ARROWHEAD)

Patient 2

A sixteen years old patient with longstanding history of seizures had his CT scan brain was performed. It revealed typical calcified periventricular calcified lesions. Two of the lesions were present near foraman of Monro. These were not compressing ventricles. The right sided lesion was larger . He also had calcified cerebellar tuber (double arrows). No hydrocephalus, orbital or supratentorial parenchymal lesion were found on CT scan. CT scan abdomen revealed normal morphology of both kidneys with no evidence of angiomyolipomas. No cutaneous, renal or lung lesions were found in this patient .The presence of typical periventricular and left cerebellar calcified lesions were sufficient evidence that this patient had tuberous scerosis. His echocardiography was also normal revealing no cardiac rhabdomyoma. He was advised to follow up in radiology department six monthly to rule out development of giant cell astrocytoma near foraman of Monro.

DISCUSSION

Tuberous sclerosis is a rare neurocutaneous syndrome, with an incidence range of 1 in 10,000 to 1 in 150,000. It was first described in 1862 by von Recklinghausen, although the term tuberous sclerosis of the cerebral convolutions was not coined until 1882 by Bourneville (hence the eponymous Bourneville disease). Years later, in 1908, Vogt noted the triad of seizures, mental deficiency, and skin lesions (commonly, though inaccurately, referred to as adenoma sebaceum) that is considered the classic clinical presentation of TS. Only 30% of patients manifest all three features of the triad, while less than 10% of patients have none of the triad's three classic features. There are no gender or race predilections. The subependymal nodules are found in approximately 95% of patients with tuberous sclerosis, with the majority being located near the caudate nucleus adjacent to the foramen of Monro.[3]

The diagnosis of TS is based on the discovery of one or more pathognomonic lesions. There is a presumptive diagnosis when two or more of the following are discovered: seizures, calcified intraventricular tumor, focal areas of increased attenuation in cerebral or cerebellar cortex, wedge-shaped calcified cortical-subcortical lesion, hypomelanotic cutaneous lesions, shagreen patches, multiple renal angiomyolipomas, cardiac rhabdomyoma, pulmonary lymphangiomyomatosis, or an immediate relative with TS.[4] If only 1 of the latter findings is present, the diagnosis of TS is considered possible, but is not presumed.

The brain is the most commonly involved organ in TS, and it is not surprising that seizure is the most common clinical sign of the disease, present in 80-100% of patients.

Several forms of hamartomas are found in the brain of the TS patient; they vary with respect to location and tumor morphology. The 4 most common lesions are the cortical tuber, white matter abnormalities, subependymal nodule (SEN), and the subependymal giant cell astrocytoma (SEGCT)[5]. The first 3 are benign, true hamartomas; SEGCT is a low grade (World Health Organization Grade I) neoplasm. The lesions vary only in their size (cortical tubers tend to be large, white matter lesions tend to be linear, radial, or wedge-shaped, and SENs tend to be small) and their location (cortical gyri, white matter, or subependyma, respectively). Subependymal giant cell astrocytomas are neoplastic tumors (World Health Organization grade I), thought to originate in a pre-existing SEN. They occur in approximately 15% of TS patients. They are typically slowly growing, solitary, and benign-acting tumors. Their morbidity relates to obstruction of the foramen of Monro, as they grow into the ventricular lumen and not into the brain parenchyma itself.[6]

REFERENCES

1. Roach ES, DiMario FJ, Kandt RS, Northrup H. Tuberous Sclerosis Consensus Conference: recommendations for diagnostic evaluation. National Tuberous Sclerosis Association. J Child Neurol 1999; 14: 401-7
2. Roach ES, Gomez MR, Northrup H. Tuberous sclerosis complex consensus conference: revised clinical diagnostic criteria. J Child Neurol 1998;13: 624-8
3. Ewalt DH. Renal lesion growth in children with tuberous sclerosis complex. J Urol 1998;160:141-45.
4. Pont MS, Elster AD. Lesions of the skin and brain: modern imaging of the neurocutaneous syndromes. Am J Radiol 1992; 158:1193-1203
5. Baron Y, Barkovich AJ. MR imaging of tuberous sclerosis in neonates and young infants. Am J Radiol1999;20:907-16.
6. Weiner DM. The Tuberous sclerosis complex: A Comprehensive Review. J Am Coll Surg 1998; 187:548-61

BILATERAL COLLOID CARCINOMA BREAST WITH AXILLARY TUBERCULOSIS.

SAJIDA QURESHI, M.S.QURAISHY, ZAHEER ALAM.

ABSTRACT

A 62 years old female presented with painful lump right breast and bloody discharge from right nipple for two months, with a biopsy report of intraductal papilloma. Excision of the involved duct and lump was done. Histopathology revealed in situ ductal carcinoma with focus of invasion. She was further investigated with bilateral mammogram and fine needle aspiration cytology (FNAC). Mammogram showed lesions in both breasts. FNAC from left breast showed atypical cells with suspicions of malignancy, Right modified radical mastectomy (MRM) and left mastectomy performed. Final biopsy report showed bilateral colloid carcinoma with axillary tuberculosis.

KEY WORDS:- *Breast carcinoma, Colloid carcinoma breast, Mucinous carcinoma breast.*

INTRODUCTION:

Cancer of breast is the commonest malignancy among females in Pakistan[1]. It is a heterogeneous disease encompassing different tumors possessing differing biology and natural history, which in turn has significant implications for clinical management. Patients with the special histological types, which are not very common and constitute less than 3% of all invasive breast carcinomas, have to be identified for proper management. Mucinous carcinoma of the breast (MCB) is a common special histological type Also known as colloid carcinoma. It constitutes 1-4% of primary breast carcinomas[2]. It is more prevalent in older patients[3,4]. This report describes a case of bilateral mucinous carcinoma breast with the axillary tuberculosis.

CASE REPORT

A 62 years old female known case of hypertension and diabetes mellitus, presented with history of right breast pain and bloody discharge from right nipple for the last two months. On examination there was 5x4 cm lump in the middle - outer quadrant of right breast with blood stained nipple discharge from single duct. Medial group of axillary lymph nodes were palpable on right side. In left breast there was nodularity. A small nodule approximately 0.5 by 1 cm in upper outer quadrant, a subareolar nodule 1 x 1.5 cm with nipple retraction and no palpable axillary lymph nodes were found on left side. The biopsy from right breast lesion done in another hospital revealed duct papilloma and duct ectasia. Excision of the involved duct and lump was done under general anesthesia and specimen send for histopathology. Immediate post operative period was unremarkable. Histopathology report revealed ductal papilloma with fibrocystic disease and florid epithelial hyperplasia. The patient came back after 15 days with a lump at the same site, about 5 x 7 cm in size, hard, fixed and nontender. Mammogram revealed BIRADS category 4, right breast and an area of increased density in upper outer quadrant with speculated margins, (BIRADS category 3) left breast, with increased density in upper outer quadrant with multiple nodular ducts. The biopsy was repeated on right breast and ultrasound guided biopsy done for lesion in left breast, reporting atypical cells highly suggestive of malignancy on both sides. Initial operation specimen was sent for review by a panel of pathologists in which the consensus was in-situ ductal carcinoma with focus of invasion - 2.5mm. After counseling, a right sided modified radical mastectomy and left sided simple mastectomy were carried out. Post operatively course was unremarkable. Biopsy report of right breast revealed in-situ ductal carcinoma with mucinous material. All 14 lymph nodes showed granulomatous inflammation with calcification, suggestive of tuberculosis. Left breast biopsy revealed infiltrating mucinous carcinoma with positive estrogen and progesterone receptors. The patient was given post

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operative hormonal treatment with tamoxifen along with antituberculous treatment. One year post surgery the patient is doing well.

DISCUSSION

Mucinous carcinoma breast is a special histological type of breast carcinoma. MCB is divided into two groups: pure MCB, in which the entire tumor consists of tumor cells with excessive extra cellular mucin surrounding them, and mixed MCB, in which the tumor also contains areas with infiltrating carcinoma devoid of extracellular mucin. MCB presents mostly in older age group females. The mean age of women with pure mucinous carcinoma is greater than those with non-mucinous carcinoma, with those younger than 35 years constituting only 1% of the patients[3,4]. Mixed MCB contains areas of infiltrating ductal carcinoma. Because of these characteristics, mixed MCB has a more aggressive behavior, a higher rate of metastatic nodal involvement, and a decreased survival rate[5,6,7]. The 10-year survival rate for pure MCB is 90% to 100%, whereas it is 60% in mixed MCB. The incidence of axillary metastases is 2% to 14% in pure MCB and 45% to 64% in mixed MCB. This justifies the treatment given to our patient. Because the status of the axillary lymph nodes is the most important determinant of prognosis in breast cancer, it can be inferred that pure MCB has a better prognosis than mixed MCB. The diagnosis of mucinous carcinoma of breast is usually done on sonography, mammography and histopathology.

The imaging features of mucinous cancer in mammography are different from more common types of breast carcinoma. It is possible to misinterpret the appearances of this slow growing tumour as a benign lesion due to rarity of speculation on mammography and distal attenuation on ultrasonography. Most cases do, however, show other features suggesting malignancy[8]. There are differences in the mammographic appearances of pure and mixed mucinous carcinomas that have a histopathologic basis. Circumscribed, lobular margins on mammograms are characteristic of large pure tumours and are the result of their microscopically evident circumscribed margins and expansile growth pattern. Irregular margins on mammograms are more characteristic of mixed mucinous tumours, regardless of tumour size, and are attributable to the fibrotic and infiltrative nature of the nonmucinous component[9]. These corresponded well with the findings in our patient.

Although the diagnosis of mucinous type of breast cancer used to be based mainly on the findings on mammography and sonography, numerous reports of the usefulness of MR imaging have been published in recent years. Mucinous carcinoma is generally believed to exhibit high signal intensity on T2-weighted images because of its large mucin component[10].

Tuberculosis (TB) and breast cancer are common diseases in developing countries. Their coexistence in the breast and axillary lymph nodes is, however, rare. It can lead to over staging of the breast cancer. Treatment compliance may also be difficult when two major illnesses exist .Primary tuberculosis coexisting with carcinoma is of rare occurrence. A possibility should always be borne in mind especially in patients from endemic areas .The synchronous occurrence of tuberculosis and carcinoma is unusual and association of the two has baffled surgeons and physicians for over two centuries. Coexistence of tuberculosis and metastatic carcinoma in axillary lymph nodes, without pulmonary or mammary tuberculosis is even rare. Warthin first described the coexistence of tuberculosis and cancer in axillary node, five other cases have been reported between 1902 and 1992[11,12,13]. In our patient there was no evidence of mammary or pulmonary tuberculosis only axillary lymph nodes were involved. This had led to preoperative over staging of the cancer due to palpable axillary lymph nodes.

REFERENCES:

1. Pakistan Medical Research Council Cancer study group. Frequency of malignant tumours in seven centres of Pakistan. J Pak Med Assoc 1977;27:335-9
2. Avisar E, Khan MA, Axelrod D, Oza K. Pure mucinous carcinoma of the breast: clinicopathologic correlation study. Ann Surg Oncol 1998; 5:447-51.
3. Rosen PP, Lesser ML, Kinne DW. Breast carcinoma at the extremes of age: a comparison of patients younger than 35 years and older than 75 years. J Surg Oncol 1985; 28:90-6.
4. Toikkanen S, Kujari H. Pure and mixed mucinous carcinomas of the breast: a clinicopathologic analysis of 61 cases with long-term follow-up. Hum Pathol 1989; 20:758-64
5. Komaki K, Sakamoto G, Sugano H, Morimoto T, Monden Y. Mucinous carcinoma of the breast in Japan. A prognostic analysis based on morphologic features. Cancer 1988; 61: 989-96.
6. Rasmussen BB, Rose C, Christensen I. Prognostic factors in primary mucinous breast carcinoma. Am J Clin Pathol 1987; 87: 155-60
7. Norris HJ, Taylor HB. Prognosis of mucinous (gelatinous) carcinoma of the breast. Cancer 1965; 18: 879-85
8. Chopra S, Evans AJ, Pinder SE, Yeoman LJ, Ellis IO, Elston CW, Wilson AR. Pure mucinous breast cancer-mammographic and ultrasound findings. Clin Radiol. 1996; 51:421-4

9. TE Wilson, MA Helvie, HA Oberman, Joynt LK. Pure and mixed mucinous carcinoma of the breast: pathologic basis for differences in mammographic appearance. Am J Roentgenol 165, 285-289,

10. Kawashima.M, Tamaki.Y, Nonaka.T, Higuchi.K, Kimura.M, Koida.T, et al. MR Imaging of Mucinous Carcinoma of the Breast. Am J Radiol 2002; 79:179-83

11. Miller RE, Solomen PF, West JP: The coexistence of carcinoma and tuberculosis of the breast and axillary lymph nodes. Am J Surg 1971, 121:338-40

12 Grege A, Kienle J. Association of tuberculosis with carcinoma breast. Radiol 1969, 93:1107-1108

13. Das DK, Mohil RS, Kashyap V, Khan IV, Mandal AK, Gulati SM. Colloid carcinoma of the breast with concomitant metastasis and a tubercular lesion in the axillary lymph nodes: a case report. Acta Cytol 1992, 36:399-403

ABDOMINAL MASSES IN CHILDREN: A DIAGNOSTIC CHALLENGE

NAIMA RASOOL, MUHAMMAD TALAT MEHMOOD, MUHAMMAD SAJJAD ASHRAF, M. RATHORE, M SHAHB ATHER

ABSTRACT

We report a 6 year old female child who presented with mass in right upper quadrant of abdomen. She was intensively investigated and with the suspicion of hydatid cyst liver received albendazole for many months. As mass increased further laparotomy was planned. At exploration it turned out to be a large retroperitoneal mass and dissected out easily. Biopsy report was that of benign teratoma.

KEY WORDS:- *Retroperitoneal teratoma, Child, Abdominal mass*

INTRODUCTION

Abdominal masses are mentioned in few primeval literatures[1]. Depending upon the age, sex, history, clinical features and associated symptoms, mostly treating physicians are able to establish the diagnosis. In many cases because of non specific features the diagnosis is not possible[2]. At times physicians get carried away because of some lesions that are commonly found in their region like hydatid cyst and treatment is ensued emperically. In this case report we describe the management of a patient where final diagnosis could only be made at laparotomy.

CASE REPORT

A 6 years old female child weighing 15 kg, referred from medical OPD for surgical opinion about right upper abdominal mass. The mass gradually increased in size over the period of 5 months. There was no history of pain, fever, vomiting and jaundice. The child was mildly anemic. An obvious bulge found in abdomen extending from costal margin right up to iliac region. It was not very sharply defined and was firm and non tender. Clinically it appeared to be of hepatic origin. The liver span was 16 cm.

Her hemoglobin was 9.8gm%. Liver function tests were within normal limits. An ultrasound done previously showed large multiloculated cystic mass 6.8cm x 5.8 cm and 4.3cm x 3.7 cm in right lobe of liver suggestive of hydatid cyst. Antibodies (IHA) were not in significant range. No treatment was given. After a month ultrasound was repeated, which revealed that cyst size increased up to 8.8cm x 6.5cm. A CT scan done showed that right lobe of the liver was grossly enlarged and two well defined hypo-dense multiloculated masses in segment 5 and 6 found. The larger measured 11cm x 8cm x 4cm with enhancing margins and internal calcifications and second measured 6.3cm x 6.8cm x5 cm, displacing the duodenum and colon towards left with dilated stomach and adjacent bowel loops (Fig. I). Again an impression of hydatid cyst was made by radiologist.

Tablet albendazole started and continued for 6 weeks. During follow up visits no change in size was noted. An ultrasound was done again which showed markedly enlarged liver, large multiloculated cystic masses with echo's in some loculi in right lobe of liver measuring 13.4cm x 6.9cm. Another echogenic mass with dense echoes and cystic areas seen in caudate lobe of liver of 6.3cm x 4.6 cm. Surgery was then planned.

Abdomen was opened through right sub-costal oblique

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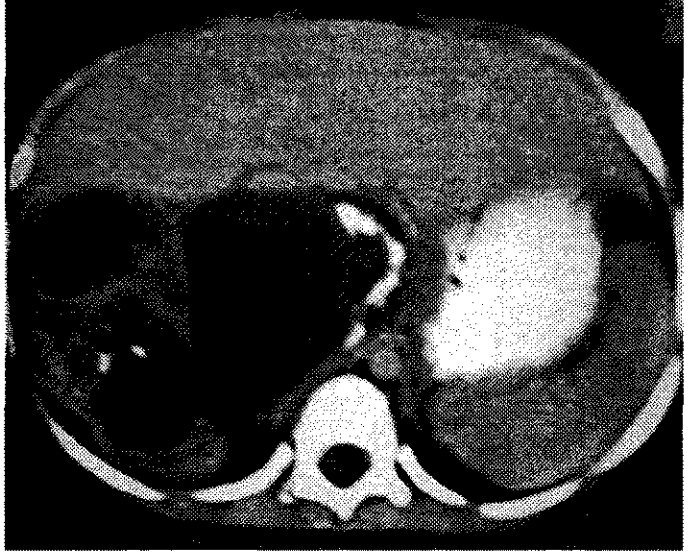
FIGURE I A LARGE MASS OF MULTIPLE DENSITIES WITH CALCIFICATION IN RETROPERITONEUM.



incision. All precautions of pre- killing of scolices were taken. On aspiration of lesion dark hay- colored mucinous fluid came out. On further dissection white cheesy material came out of partially opened cyst with few hairs. The clinical diagnosis of teratoma made at this stage. Mass was present between inferior surface of liver and right kidney being attached with surrounding structures by flimsy adhesions that were separated easily. The whole mass excised. Post- operative recovery was un- eventful. The biopsy report of excised mass was benign cystic teratoma containing glandular structures, respiratory epithelium, skin appendages, and glial tissues with small fragment of pancreatic tissues. The child was referred to pediatric oncologist for documentation in tumor registry.

DISCUSSION

Retroperitoneal teratoma always poses diagnostic problems because it is an uncommon lesion[3,4]. Teratomas are neoplasm of pleuripotent cells, and composed of wide variety of tissues foreign to the organ of origin. The commonest sites are gonads and in extra gonadal sites, sacrococcygeal is the commonest site followed by mediastinum and retroperitoneum constituting about 4% of all teratomas[5]. Fifty percent occur in 1st year of life. Girls are more commonly affected (2:1). In retroperitoneum, majority (90%) are benign[6], and situated in close proximity of liver and kidney. Excision is mandatory. Even huge tumors with bilateral retroperitoneal involvement can be excised with minimal damage to the adjacent structures[7]. Adjuvant chemotherapy is some times necessary in un- resectable benign and malignant tumors.

In the pediatric age group, abdominal masses may prove to be a challenge in terms of diagnosis and treatment. Clinically asymptomatic long standing masses are a real diagnostic dilemma. Due to small abdominal cavity in children even site of origin can not be predicted accurately. X-ray abdomen, ultrasound and CT scan are very useful tools in the diagnosis of abdominal masses but there is a great overlap of sonological and radiological findings in various non- neoplastic lesions like mesenteric cyst, pancreatic pseudo cyst which, hydatid cyst and choledochal cyst can confuse the picture. Findings may mimic neoplastic lesions like teratoma etc[8] Pre-operative diagnosis of an abdominal mass is helpful not only in predicting benign and malignant lesions but also predicting its resectability. Pre-operative diagnosis also helps in planning surgical procedure. In our case it did not happen. Radiological investigations may be misleading in cases of abdominal masses as happened in our case[9]. Radiologist and surgeon should sit together and discuss in detail all possible conditions and diagnostic features of specific lesions should be looked for. All possible rare causes of abdominal mass should be kept in mind even when one is quite sure of a specific lesion.

REFERENCES:

1. Delcore R, Cheung LY. What's new in ACS surgery; ACS Surgery 2003.
2. Perrelli L., Calisti A., Molle P. Abdominal masses in pediatric age; Clinical aspect and diagnostic approach in 52 cases. Pediatr Med Chir 1981; 3:87-91.
3. Luo CC, Huang LS, Chu SM, Chao HC, Yang CP, Suehc H. Retroperitoneal teratoma in infancy and children. Pediatr Surg Int 2005; 21: 536-40 .
4. Akhtar J, Zamir N. Ahmed S, Aziz A. Retroperitoneal teratoma. J Surg Pakistan. 2000; 5: 48 – 9
5. Dehner LP. Gonadal and extragonadal germ cell neoplasm: Teratomas in childhood. In Finegold M (ed): Pathology of neoplasia in children and adolescent. Phidalphia,WB Saunder, 1986, 282-312.
6 AugeD, Satge D, Sauvage P. Les teratomes retroperitonecaux de la periode neonatale. Ann Pediatr (Paris)1993; 40: 613-21.
7. Chaudhary A, Mirsa S, Waklu A, Tandan RK, Waklu AK. Retroperitoneal teratoma in children. Indian J Pediatr 2006; 73:221-23

8. Yang DM, Jung DH, Kim H, Kang JH, Kim SH, Kim JH, H Wang HY. Retroperitoneal cystic masses :CT, clinical and pathological findings and literature review 2004 ,24:1353-65

9. Nobusawa H, Hashimoto T, Munechika H, Gokan T, Soejima K, Ohta S, Shiokawa A, Ukisu R, Motoya H, Monda M et al. CT findings of Primary retroperitoneal cystic tumors; Special emphasis on the distinction benignancy from malignancy. Nippon Igaku Hoshasen Gakkai Zasshi 1995; 55:861-66