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Properly trained surgeons are extremely essential to health provision in any country; specially Pakistan, where there is an abundance of quacks and semi-trained people carrying out surgical work. It is all the more important to create a corps of well trained surgical manpower so that its services can be availed by the population and they, in turn, can impart training to would be surgeons.

The training program essentially has three aspects :

- Definition of objective - At the end of training what are the goals to be achieved for making/training a surgeon or in other words, what do we envisage the end product to be ?
- What are the 'methods' for achieving the objectives ? And how are we going to train the would be surgeon ?
- How will we know that the objectives have been achieved ? In other words, the 'evaluation' process.

DEFINITION OF OBJECTIVES

Basically, objectives are modified by the needs of the community in which the surgeons have to practice. The objectives can be classified as follows:

- Impartation of adequate knowledge of the subject.
- Training in appropriate skills required for practicing the speciality.
- Giving proper training in the attributes and behaviours required for practicing the speciality, particularly in our environment.

Thus if the above objectives are achieved, it can be said that the trainee has become a properly trained surgeon. If any of the above remain unfulfilled, his training will be inadequate and he will not be a properly trained surgeon.

METHOD OF TRAINING

The best method of training is to have proper training programs in the major teaching hospitals of the country. Spread over a period of four years or more, these programs should cover training in all the aspects mentioned above. While this would be the ideal situation, presently very few proper training programs exist in the country. Whatever training programs do exist are also run sporadically without any accreditation from any government agency. From time to time, the Pakistan Medical & Dental Council sends teams to check the training programs, but this occurs once every five years. There is no continuous method of monitoring these programs though College of Physicians & Surgeons Pakistan is putting in a lot of effort in this direction by sending teams for inspections and recognizing institutions for post graduate training and holding workshops, courses and seminars etc. for trainers and trainees.

It is very essential, in fact crucial, that proper training programs continuously monitored by a federal accreditation agency should be implemented and more slots created.

EVALUATION

During and at the end of a training program, there should be evaluations to ascertain the success or otherwise of training and achievement of objectives, continuously and regularly.

This evaluation should be of two types :

- a) Continuous Evaluation - regular assessment throughout the training period. Presently no such evaluation is taking place though C.P.S.P has introduced log books for the purpose.
- b) Final Evaluation - A final examination at the end of the training period. This is perhaps the only aspect of the entire training process which is being satisfactorily carried out by an examination body, in our case, the C.P.S.P. and abroad, the Royal Colleges and the American Board. It is however imperative that the training programs should be proper to make the final certifying examinations meaningful.

It should be remembered that surgeons never stop being trained or educated. Such training continues throughout their career. Continued medical education (CME) is essential for training of trainers and trainees alike. Professional societies other than medical institutions have an essential role to play in this direction in:

- ☐ Setting the objectives.
- ☐ Checking the veracity of training programs, pursuing trainers and the government to play their role in these programs to the best of their abilities
- ☐ Constantly overseeing and checking the validity of the evaluation process.

Except Research and Training Monitoring Cell of C.P.S.P., there is no organization which is doing these tasks in the country:

IRSHAD WAHEED

POST CHOLECYSTECTOMY JAUNDICE- TIMING PRESENTATION AND CAUSES

ZIAUL ISLAM, ASADULLAH KHAN, IRSHAD WAHEED, WAQAR AHMED

ABSTRACT:

20 patients of Obstructive Jaundice, 15 days to over 4 years after cholecystectomy, were admitted in surgical department of Jinnah Postgraduate Medical Centre Karachi from May 1992 to June 1994. 2 were male and 18 were females with mean age of 53.5 years. At the time of admission, patients had Jaundice of 15 days to 60 days duration. 18 were operated, out of which 7 (35%) had stones in common bile duct, 4 (20%) had benign stricture of bile duct and 7 (35%) patients had malignancy (2 patients had malignancy of the bile ducts and 5 patients had malignancy of pancreas). Causes, operative procedure and outcome are discussed.

KEY WORDS: Postcholecystectomy Jaundice

INTRODUCTION

Among many different complications of Cholecystectomy, including post Cholecystectomy syndromes, injury to the bile duct and adjacent organs, Jaundice is a known complication. The most common cause of post-cholecystectomy Jaundice is a missed stone in the common bile duct (CBD). To overcome this complication a number of studies have examined the importance of pre-operative and intra-operative criteria that can exclude such stones, including operative cholangiography in the detection of unsuspected CBD calculi during open cholecystectomy^{1,3}. The incidence of missed stone even after careful pre-operative history and investigations is, 3-9% in patients who had never been Jaundiced⁴.

Yip & Lam found stones in only 3 percent of those who had not been Jaundiced⁵. Trauma to the common bile duct including accidental ligation or excision of bile duct can lead to post Cholecystectomy Jaundice. Approximately 0.5% patients undergoing conventional Cholecystectomy sustain an extrahepatic bile duct injury⁶. Important factor that can lead to injury to CBD is failure to recognize the anomalies of the bile duct and the blood vessels which are present in more than 20% of the patients⁷. Primary hemorrhage and inflammation around can also lead to trauma to CBD⁸. Excessive dissection of bile duct causes ischaemia which is an important factor in the pathogenesis of postoperative bile duct stricture⁹.

Cholangitis can occur with pre-existing narrowing or stricture of CBD that also leads to Jaundice.

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MATERIAL AND METHODS AND RESULTS

20 patients presented between May 1992 to June 1994 in the department of surgery having Jaundice after Cholecystectomy. All were included in the study. Detailed history and clinical examination were obtained in every case. Notes of the previous operation were collected from patients and the hospital record. All the patients had to different investigations to evaluate the cause of Jaundice. All were found to be suffering from obstructive Jaundice.

Of the 20 patients, 18 female and 2 male, age of the patients ranged from 41-65 years, with maximum number of patients in age group 45-50 years (Table I).

TABLE I

Age Range	No.	%
41-44	4	20.0
45-50	6	30.0
51-55	3	15.0
56-60	3	15.0
61-65	4	20.0
Total	20	100.0

Duration of Jaundice ranged from 15 days to 60 days. Most of the patients presented with Jaundice of not more than 15 days (Table II).

In 10 patients the pattern of Jaundice was intermittent but in rest of the cases, Jaundice was progressive. Interval between appearance of Jaundice and Cholecystectomy ranged from few days to over 4 years, with maximum

TABLE II

Duration of Jaundice	No	%
15 days or less	13	65.0
16 days to 30 days	5	25.0
31-60 days	2	10.0

number of patients developing Jaundice within 6 months (Table III).

TABLE III Interval Between Cholecystectomy And Appearance of Jaundice

Interval	No.	%
Less than one month	5	25.0
1 Month to 6 Months	5	25.0
6 Months to 1 Year	2	10.0
1 Year to 1 1/2 Year	3	15.0
1 1/2 Years to 2 Years	1	5.0
2 years to 4 years	2	10.0
Over 4 years	2	10.0
Total	20	100.0

Clinical examination revealed presence of anaemia in 12 patients and Jaundice in all the patients. No group of lymph nodes were enlarged in any patient. Abdominal examination showed mass in the right upper quadrant in 7 patients with ill-defined margin and irregular surface. LFTs were done in all the 20 cases which showed markedly raised alkaline phosphates in all cases and gamma G.T raised in 9 patients.

Ultrasonography was done in all the patients showed mass in 7 cases with liver metastasis in 4 patients and dilated CBD in 12 cases. Percutaneous transhepatic Cholangiogram (PTC) was done in 9 cases which showed intrahepatic dilatation and out of that, 6 cases had obstruction at the junction of right and left hepatic ducts. Computerized tomography (C.T scan) was done in 3 cases, which demarcated mass occupying whole of the periampullary area.

Out of 20 patients 18 patients underwent exploration. 2 patients died before any operative intervention. Operative findings showed retained stone in CBD in 7 patients, out of which 2 patients had Choledochoduodenostomy, already done at the time of first operation. Benign stricture was present in 4 patients and malignancy in 7 patients (Table IV).

Procedures done were: only biopsy done in 5 cases due to extensively spreaded growth; Hepatico-Jejunostomy in 2 patients, as they were having high obstruction in CBD. Choledocho-juejunostomy in 6 patients, Choledocho-duo-

TABLE IV Operative Findings (18 Patients)

Retained Stone in CBD (2 pts had Choledocho-duodenostomy)	7
Benign Stricture	4
Malignancy	7
Total	18

denostomy in one and Choledocholithotomy in 4 patients (Table V).

TABLE V

Operative Procedure	No.
Only Biopsy (due to extensive spread of growth)	5
Hepatico- Juejenostomy	2
Choledocho- Juejenostomy	6
Choledocho duodenostomy	1
Choledocholithotomy	4
Total	18

Morbidity and mortality showed that 2 patients died before any operative intervention; no death recorded per-operatively. 3 patients died post-operatively within 15 days of operation and 3 patients died in follow-up period. 5 patients are still alive and leading healthy life and are coming for follow-up regularly. No information is available about rest of the patients as they are not coming for follow-up.

DISCUSSION

We studied 20 cases of post Cholecystectomy Jaundice to see the causes of Jaundice and study its relationship with cholecystectomy. The usual causes of such Jaundice are missed stones in CBD, operative trauma to CBD leading to strictures and infection.

Murison et al, who recommends the need of preoperative cholangiogram, in his study, showed 70% of patients, who developed Jaundice after cholecystectomy were due to missed stone in CBD¹⁰. To minimise the risk of missed stones, preoperative criteria in Table VI has been suggested by various authors and by following this criteria, we can exclude such stones without Cholangiography. This preoperative criteria alone can identify patients with risk of common bile duct stones.

Ultrasonography assessment helps to show multiple stones in gall bladder which are likely to slip into the CBD before or during the operation and also gives the diameter of CBD. It can further increase the accuracy of predic-

TABLE VI Criteria For Assessing CBD Stone Pre Operatively

History	Jaundice Pancreatitis
Plasma Biochemistry Elevated Values of	Bilirubin Amylase Transamines Alkaline Phosphates
Ultrasound	CBD diameter over 7.5 mm

Source . Cordu et al. Br. J. Surg. 79; 945-947, 1992.

tion of likely duct stones. Although these criteria contribute a lot to excluding the CBD stones, even then missed stones are found in CBD in about 3-9 % cases⁵. Therefore, the need of operative cholangiography has been emphasized. The criteria in Table VI are accepted by many authors for selection of patients for operative Cholangiography at Cholecystectomy¹². Voiles et al. performed 453 laparoscopic cholecystectomies in which operative cholangiography was attempted on selection basis; only 2 patients had symptoms suggestive of duct stone after operation¹³.

All the above measure are adopted and advocated to prevent missed stone in CBD after cholecystectomy and it shows the commonness of missed stones which is a cause of post Cholecystectomy Jaundice. In our study of 20 cases of post cholecystectomy Jaundice, 7 (35%) had missed stones.

Bile duct stricture is uncommon but a serious complication of surgery of gall bladder. More than 80% cholecystectomy lead to the development of Jaundice post operative¹⁴. Lillemae and Pitt in 1990 showed 75% of benign stricture of CBD are due to trauma to CBD during operation and incidence of trauma is 2% during Cholecystectomy with exploration of CBD¹⁵. Approximately 0.5 percent of patients undergoing conventional Cholecystectomy sustain an extrahepatic bile duct injury¹⁶. CBD trauma occurs in difficult Cholecystectomies in which adhesions and fibrosis in the surrounding region is present. Lack of appreciation of congenital variations of the bile duct and the blood vessels are important factors in its causation⁶⁻⁷. Healing of bile duct injury is associated with excessive fibrosis, probably because of damage to the blood supply of the duct and the fibrosing effect of bile on injured tissues¹⁷. Many a times injury to the duct occurs during an attempt to control the bleeding and this is supported by

associated injury to the hepatic artery in 57% of the patients in postcholecystectomy biliary stricture¹⁸. In our study 4 patients (20%) had benign stricture, of which 3 patients had difficult Cholecystectomies due to contracted and fibrosed gall bladders.

Proponents of routine operative cholangiography, both at conventional and laparoscopic operations, claim that it minimizes the chance of bile duct damage and allows immediate recognition and repair of some injuries¹⁹.

It was interesting that in our series of 20 cases, 7 (.35 %) cases of post Cholecystectomy Jaundice turned out to be because of malignancy. In all the 7 cases of biopsy of gall bladder, no malignancy was seen at the time of first surgery.

The period between Cholecystectomy and development of Jaundice in patients who had malignancy ranged from 5 months to over 4 years as compared to early manifestation of post operative Jaundice in benign cases i.e within 6 months.

The possibility of the initial growth being there at the time of Cholecystectomy, and being missed cannot be ruled out, as in our study one patient had some suspicious area at Cholecystectomy who later developed malignancy.

A thorough palpation of the surrounding structures and biopsy of suspicious areas at the time of operation leads to early diagnosis and may be the curative treatment.

CONCLUSION

Missed stone in the common bile duct and bile duct injury due to imprecise dissection and inadequate demonstration of anatomy are not an uncommon cause of post cholecystectomy Jaundice and this complication can be minimized by carefully following up preoperative criteria and use of intraoperative cholangiography in selected cases.

Apart from benign strictures and missed stones in CBD, malignancy is an important cause of post cholecystectomy Jaundice. At open Cholecystectomy routine palpation of pancreas and other neighbouring structures and biopsy of suspicious area can lead to early diagnosis and treatment.

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CONGENITAL JEJUNAL AND ILEAL ATRESIA: IS IT THE SAME DISEASE ?

JAMSHED AKHTAR AND ABDUL AZIZ

ABSTRACT:

In a study of 30 patients with jejunal atresia (JA) and ileal atresia (IA) more similarities than differences were found as regard to number, sex, gestational age, antenatal perforation, associated malformations and type of atresia. The only significant difference was that of intrauterine growth retardation (IUGR) which was more pronounced in patients with JA (83.3%) than IA (38.8%). Our study does not support the hypothesis, as proposed by others, that JA and IA should be considered separate diseases because of more similarities than differences.

KEY WORDS: *Intestinal Atresia, Neonate, Congenital diseases*

INTRODUCTION

Atresia of alimentary tract can occur anywhere from oesophagus to anal canal. Of small bowel atresia jejunal and ileal atresia are grouped together and are considered to be the result of same pathology¹. Heij et al¹ had postulated that JA and IA should be considered separate diseases as there are more differences than similarities on the basis of observation on their patients with small bowel atresia². We conducted a study at National Institute of Child Health (NICH) Karachi to find out whether this applies to our patients or not.

MATERIAL AND METHODS

During one year period from July 1995 to June 1996 all patients with jejunal and ileal atresia, who were managed at NICH, were included in this study. The data collected includes gestational age, birth weight, sex, age at presentation, complications at presentation, operative findings including type of atresia, procedures performed, post-operative complications and outcome. At the end, data related to JA and IA was compared.

RESULT

In one year period 30 patients with JA and IA were managed at NICH. There were 12 patients with JA and 18 with IA. A detailed comparison is given in Table I.

Various type of atresia seen in present study are given in Table II

DISCUSSION

First case of small bowel atresia was described by Goeller on autopsy of a still born female baby³. Various theories

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have been put forward to explain the pathological events resulting in atresia. According to vascular theory, failure of blood supply to a segment of gut results in atresia. This is particularly so in type III atresia. Vascular deficiency may

TABLE I Comparison between Jejunal Atresia and Ileal Atresia

	Jejunal Atresia	Ileal Atresia
Number	12	18
Sex (M/F)	7/5	9/9
Twins	Nil	Nil
Associated Malformation	3	2
Antenatal Perforation	1	2
Preterm delivery	1	2
IUGR	10 (83.3%)	7 (38.8%)
Birth weight (Mean)	2.1 kg	2.5 kg

TABLE II Type of Atresia

	Jejunal Atresia	Ileal Atresia
TYPE I	3	5
TYPE II	Nil	1
TYPE III	6	12
TYPE IV	3	Nil

be the result of thrombosis of mesenteric vessel, volvulus or intussusception⁴. Multiple atresia are supposed to be the result of intrauterine infection⁵.

In our study of 30 patients with JA and IA, we did not find significant differences except for IUGR which was more pronounced in cases of JA (83.3%) than IA (38.8%). This probably is the result of less contribution to the nutrition of the fetus by the functioning bowel. It has been proved in animal studies and has been observed in other studies that a significant amount of nutrition to the growing fetus is provided through enteral route by swallowed amniotic fluid which has a nutritive value⁶⁻⁹.

It has been proposed that because of less optimal vascularization of ileum as compared to jejunum, more perforation occurs in IA cases. Jejunum, because of better compliance, is capable of massive distention while ileum is not¹⁰. We did not observe any significant difference in rate of antenatal perforation in our study.

Our data does not support the hypothesis that JA and IA should be considered separate diseases because more similarities were found, than differences between these two types of atresia.

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VESICoureTERIC REFLUX

KHALID M.A. KHAN, AFROZE RAMZAN

ABSTRACT:

A descriptive prospective study was carried out on 50 patients with confirmed Vesicoureteric Reflux. Male to female ratio was 2:1. Thirty two (64%) patients were more than 5 years of age. Anemia and urinary tract infection (UTI) were the commonest presentations. Chronic renal failure (CRF) on presentation was seen in 30 (60%) patients. Grade IV reflux on Micturating cystourethro-gram (MCUG) was present in 40 (80%) patients. Close communication between physicians and surgeons is stressed to embark on early surgical treatment as and when required.

KEY WORDS: Vesicoureteric reflux, Urinary tract infection, Chronic Renal failure

INTRODUCTION:

Vesicoureteric reflux (VUR) is the retrograde passage of urine from the urinary bladder into the ureter and pelvicalyceal system and potentially into the renal parenchyma¹.

The three major consequences of VUR are:

1. It maintains a residual volume of urine in the urinary bladder and therefore predisposes to UTI.
2. In the presence of UTI, it transmits bacteria to the upper urinary tract.
3. It permits the transmission of bladder pressure to kidneys.

The causal relationship of VUR and the development of renal paranchymal scars (reflux nephropathy) is well established². Most common event leading to its detection is urinary tract infection³. Clinical presentations otherwise may remain asymptomatic. VUR is discovered during the investigation of CRF or hypertension. VUR is the most common abnormality found in children with UTI, whether the infection is symptomatic or asymptomatic. It is the commonest primary preventable cause of CRF, as has been shown in an earlier study carried out at National Institute of Child Health (NICH)⁴. It is also consistent with studies of CRF patients at Guy's Hospital⁵ and Turkey⁶. First degree relatives of children with VUR have more than 30% incidence of reflux and should be screened⁷.

MATERIAL AND METHODS

This is a descriptive study of patients attending National Institute of Child Health renal unit and having VUR on micturating cystourethrogram (MCUG). The study period was 1994 - 1996. Patients included in the study ranged in age from 0-13 years.

Objectives of the study were to see

1. The clinical profile of the patients with VUR
2. The grade of reflux on MCUG.

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RESULTS

A total of 50 cases were included in the study. There were 31 (62%) males and 19 (38%) female patients (Table I).

TABLE I Age and sex break up of patients with V.U.R

Age	Male	Female	Total	%
0-1 Year	6	1	7	14
2 - 5 Years	7	4	11	22
> 5 Years	18	14	32	64
Total	31	19	50	100

Anemia and UTI were present in 48 (97%) patients. Failure to thrive was seen in 41 (82%). CRF was present in 30 (60%) patients. Retention with dribbling was seen in 20 (40%). Hypertension was present in 4 (8%) patients. Grades of VUR are given in (Table II).

TABLE II Grades of V.U.R. ON M.C.U.G.

Grade	Unilat	Bilat	Total	%
I	-	-	-	-
II	-	1	1	2
III	3	6	9	18
IV	13	27	40	80
V	-	-	-	-
Total	16	34	50	100

Posterior urethral valves were present in 16 (32%) patients. Primary VUR implying no other abnormalities was noted on MCUG in 17 (34%) patients.

DISCUSSION

Male to female ratio of patients presenting with VUR is 2:1. The alarming finding is that majority of patients 32 (64%) were more than 5 years of age and that majority of

patients had grade IV VUR. Natural history of VUR is that 10-15% of cases resolve spontaneously each year with upto 80% of grade I and II and 40% of grade III, IV and V resolve without surgical intervention⁸.

The goal of therapy for children with VUR is to :

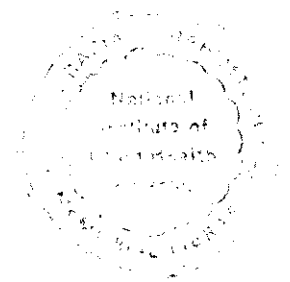
1. Protect the kidneys from scarring.
2. Allow maximum renal parenchymal growth.
3. Preserve renal function.

Because injury to kidney is related to infection, whether clinical or subclinical, the goal is to prevent UTI with prophylactic antibiotics until the reflux resolves or is surgically corrected. Strong index of suspicion for UTI in febrile infants and children with no obvious cause for fever have to be maintained particularly in younger children as the signs and symptoms may be non-specific. Fever alone may be an important clinical sign. Any UTI in a child should be evaluated with renal ultrasound and MCUG is

done to detect reflux. Prompt evaluation provides the best hope for preventing any further and avoidable renal damage.

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POSTERIOR SAGITTAL ANORECTOPLASTY IN ANORECTAL MALFORMATIONS

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ABSTRACT:

From January 1994 to December 1996 Posterior Sagittal Anorectoplasty (PSARP) was performed in 32 patients with intermediate and high variety of anorectal malformation (ARM). There were 25 (78%) male and 7 (22%) female patients. Rectoprostatic urethral fistula was the commonest in males and recto-low vaginal in females. Fifteen patients who underwent colostomy closure were included in this study. Remaining 17 have still to undergo colostomy closure. Good level of continence was achieved in 8 (53.8%), fair in 4 (26.2%), soiling on effort in 2 (13%) and frank incontinence in one patient (7%). PSARP technique produced satisfactory results.

KEY WORDS: Anorectal, surgical technique, follow up

INTRODUCTION

Ano-rectal malformations are common congenital problems encountered in paediatric surgical practice¹. The level of termination of bowel loop in relation to levator determines the mode of treatment. Low variety lesions, where bowel loop has passed the levator sling, can be treated by anoplasty. But where bowel loop is in supra levator (high variety) or partially translevator (intermediate) position, a precise technique is necessary to identify the sphincter group of muscles; to achieve fecal continence. We are practicing PSARP devised by de Varies and Pena². This technique permits identification of sphincters and its reconstruction around the pulled down bowel, under vision.

PATIENTS AND METHODS

This prospective study was conducted from January 1994 to December 1996 in the Department of Paediatric Surgery, Nishtar Hospital Multan. Criteria for the patients to undergo PSARP were appropriate body weight and haemoglobin and presence of intact perineal sensation as ascertained by nerve stimulator. Distal cologram was done in all the patients to visualize the recto-genito-urinary fistula. Nerve stimulation was used during operation to identify the sphincters (Fig. 1). Fistulae were dissected after opening the rectal stump (Fig. 2). Foley's catheters were retained for 10 days after operation in male patients. Anterior ends of the sphincter slings were stitched to the bowel loop. Two weeks after operation, dilatations were started with hegar's dilator and continued for three months. Colostomy closure was performed when dilatation upto 13/14 size was achieved. After colostomy clo-



Fig:1. Nerve stimulation to identify the sphincters



Fig:2. Opening of rectal stumps

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sure fecal continence was graded as good and fair, stress soiling and frank incontinence depending upon the number of stools per day and effect of raised intra-abdominal pressure.

RESULTS

Eight patients (52.8%) had good control of defecation. Table I. Their stool frequency was 2-3 per day. In 4 patients (26.2%) frequency was 3-5 per day but with good control. Two patients (13%) had problems of stress incontinence and in 1 patient (7%) there was no control of defecation. Complications seen in these patients (Table II) were anal stenosis (3 patients) due to lack of parents cooperation to continue dilatation. Wound dehiscence occurred in one patient.

TABLE I Results of continence after P.S.A. R.P
Total No. of Patients 15

No. of Pts	Frequency of stool	Grade of continence	
8	2-3/day	good	52.8%
4	3-5/day	fair	26.2%
2	3-5/day stress soiling	Poor	13%
1	Incontinence	bad	7%

DISCUSSION

Essential principle in the treatment of high and intermediate varieties of ARM is placement of pulled down bowel

S/No	Complications	No. of Pts
1	wound dehiscence	1
2	wound infection	0
3	anal stenosis	3
4	mucosal ectropion	0
5	neurogenic	0
6	loop retraction	1

within the sphincters to preserve continence³. Many early repairs failed because they did not define the sphincter muscle group. We agree with de Varies and Pena that muscle complex which is key to fecal continence should be identified in its continuity through posterior approach⁴. In our series 12 (80%) out of 15 achieved good to fair fecal control, which highlights the success of this technique.

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DEATH DUE TO ROAD TRAFFIC ACCIDENTS : JINNAH POSTGRADUATE MEDICAL CENTRE EXPERIENCE

SHABBIR HUSSAIN, GHULAM ALI, MOHAMMED ASLAM, IRFAN QURESHI, RAFIQUE KHANANI, SANAULLAH

ABSTRACT:

A total of 602 autopsy reports of victims of road traffic accidents (RTA), performed over a period of 3 years from 1st January 1992 to 31st December 1994 at Jinnah Postgraduate Medical Center, (JPMC) Karachi were reviewed. Most of the fatalities resulted due to head and chest injuries. Majority of fatal accidents occurred late in the night. Health authorities, in collaboration with electronic media, can do a lot in reducing this rate by creating mass awareness.

KEY WORD: Road traffic accidents: death, injury.

INTRODUCTION

The term "Accident" may imply that accidents are random events beyond human control; is an entirely discredited notion. A large body of evidence convincingly shows that injuries are predictable and subject to same rules as any other scientific discipline. Continued use of the word "accident" rather than injury reinforces the pervasive view that injuries are largely inevitable. Accidents are leading cause of potential life loss, larger than cancer and heart disease combined. The scope of improvement is especially compelling and large number of measures await widespread implementation.

The problem of RTAs is well documented in developed countries^{1,2}. On the contrary such data is absent in Pakistan. The purpose of this study is to find out fatal injuries and causes of death from road traffic accidents (RTAs).

MATERIAL AND METHOD

This work is based on post mortem examinations carried out at Jinnah Postgraduate Medical Center Karachi over a period of 3 years from 1st January 1992 to 31st December 1994. A total of 602 postmortem reports of RTA cases were studied. An attempt was also made to ascertain the cause of death and pinpoint fatal injury.

RESULTS

Out of 602 autopsies carried out at JPMC on RTA victims, 513 (85%) were males and 89 (15%) females. Majority (34.4%) of victims were of 20-30 years age group. The age of the youngest victim was 2 years and of the oldest was 77 years. In majority of fatal cases the regions involved were head, (462 cases -76.7%), chest and lungs (85 cases -14.1%), head, brain, vertebral column (49 cases -8.1%) and limbs (79 cases -13.1%). The cause of

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death in 99% of the cases was cardio-respiratory failure due to acute hemorrhage or from head injuries. Majority of fatal accidents occurred late in the night.

DISCUSSION

The most universal risk for all living creatures is an accident. Be it a fungal spore, a mosquito, a tree, a dolphin or a man, the chance of an accident causing structural damage is always present. RTA's are the leading cause of death from injury and occur universally^{4,5}.

Death predominantly occurs due to head injuries. Several studies on the use of helmets/hard hats exhibit that they reduce head injuries and facial disfigurement. We can safely say that injuries from RTA's are a health problem, as they cause morbidity, mortality, disfigurement and loss of economically productive hours.

Health authorities, in collaboration with electronic media, can lower this rate by creating public awareness as to the observation of safety rules both by vehicle drivers and pedestrians^{6,7}. Wearing helmets, using seat belts and reducing working hours of commercial vehicle drivers can go a long way in preventing fatal accidents.

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LIVER ABSCESS IN CHILDREN

ABDUL SATTAR MEMON, JAN MUHAMMAD MEMON

ABSTRACT:

Out of the 500 cases of Liver abscess treated from August 1988 to July 1994, 40 patients were under 12 years age. These were diagnosed on the basis of clinical and Ultrasound examinations. Abscess aspiration in ultrasound guidance under general anaesthesia along with anti-amoebicidal treatment and antibiotics was the line of management.

KEY WORD: Liver Abscess, technique

INTRODUCTION

Liver abscess is considered to be an uncommon condition in children and it is assumed that pyogenic abscess are more common than amoebic liver abscess^{1,2}. We conducted this study to collect data related to liver abscess in children in a general surgical hospital.

MATERIAL AND METHODS

This study was conducted in a General Surgical Ward, where patients of all age groups with surgical problems are dealt with. Of the 500 cases of liver abscess diagnosed and treated from August 1988 to July 1994, forty 40 (8%) were children under twelve years of age. Investigations conducted include complete blood picture, liver function tests and Ultrasound. All underwent needle aspiration in ultrasound guidance under general anaesthesia and pus was sent for culture, sensitivity and cytology. All received metronidazole and prophylactic broad spectrum antibiotics.

RESULTS

Out of the 40 children, 30 (75%) were males. The age ranged from 8 months to 12 years. Most of the patients were between 5 and 6 years of age. Thirty children were anemic with mean hemoglobin of 8 gm%. Thirty six (90%) patients had neutrophilic leucocytosis. Right lobe was affected in 34 patients. Complete aspiration of abscess was done in all cases. No complication occurred in any case. Culture of abscess for pyogenic organisms was positive in 3 cases only. E. Coli was the organism grown.

DISCUSSION

Liver abscess is not uncommon in children. Pyogenic abscess is common in West and amoebic liver abscess in tropical and developing countries. Male preponderance

seen in our study is much higher than other studies where 15:1 and 11:1 have been reported^{3,4}.

In our series all children presented with fever and pain in right upper abdomen and tender hepatomegaly. None of the patients presented with jaundice as reported by others⁵⁻⁸. Among the laboratory findings anemia and neutrophilic leucocytosis were commonly observed, which is comparable to study of Moores⁶. Ultrasound is recommended as gold standard to diagnose and to locate the abscess for aspiration and for follow-up³. Culture in our study was positive in only 3 cases and E. Coli was grown. However, both showed cytological features of amoebic liver abscess on microscopy and we assume that it is the result of secondary infection. We did not come across any complication and all of them were cured with single attempt of aspiration along with metronidazole and antibiotics for two weeks. It is concluded that liver abscess in children should be aspirated for early recovery to prevent any complication.

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HELICOBACTER PYLORI COLONISATION OF THE ANTRUM AND INCIDENCE OF PEPTIC ULCER

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ABSTRACT

160 patients with dyspeptic symptoms underwent upper gastrointestinal endoscopy with suspicion of duodenal ulcer for *Helicobacter pylori* (H.P) colonization in Surgical Unit-I of Jinnah Postgraduate Medical Centre Karachi, from September 1993 to March 1995. *Helicobacter pylori* could be demonstrated histologically in 39 patients out of which 28 had duodenal ulcer and 15 had chronic gastritis. This strong association of *helicobacter pylori* infection with duodenal ulcer suggests a possible etiological role for the bacterium in this disease.

KEY WORDS: *Helicobacter Pylori*, Peptic Ulcer, Gastritis.

INTRODUCTION

One of the strongly held notions of medical pathophysiology is that acid is the primary cause of duodenal ulcer. Indeed the term acid peptic disease reflects the prevailing concept of cause and so therapy is aimed primarily at acid reduction. It now appears, however that an even more important factor may be responsible for ulcer that is infestation with *helicobacter pylori*¹.

Study of gastric bacteriology over a long period led to isolation of *Helicobacter pylori* from gastric biopsies by Marshall and Warren² in 1983. Much of their studies showed association between HP and many common disorders of upper GI tract, suggesting an etiological role of this bacterium in some of these conditions.

Morphologically HP is unipolar, multiflagellate, spiral organism with bluntly rounded ends; 4.0 mm in length which reside deep in the mucosa, especially the antrum of stomach and prepyloric area^{3,4}.

MATERIAL AND METHOD

Between September 1993 and March 1995 more than 500 patients appeared in the Surgical OPD with complaint of upper abdominal problems. After careful history-taking and examination, 160 patients were selected for upper G.I. endoscopy due to suspicion of having peptic ulcer. After asking for overnight fasting and gargles with diluted 4% xylocaine before procedure, endoscopy was done with XV10 G.I.F. flexible endoscope. A number of patients also required injection Buscopan 1/2 amp. I/V as to reduce the increased motility of stomach and few patients required injection diazepam 1/2 amp. (5mg) as they were very irritable. Multiple biopsies were taken in all patients from antrum and sent for histopathology for *Helicobacter pylori*.

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RESULTS

160 patients had upper GI endoscopy, 42 were male and 118 were female. Their age ranged from 16 years to 50 years, with maximum patients in the age group of 16 to 30 years (Table I).

TABLE I

Age Group	No.	%
16-30 Years	102	63.750
31-40 Years	35	21.875
41-50 Years	23	14.375

No major complication was noted, less than 10% cases had mild abdominal pain after the procedure which improved within 24 hours.

Endoscopic findings showed that 28 patients had duodenal ulcer on the anterior wall and 15 patients had gastritis. Only 3 patients out of 28 had both duodenal ulcer and gastritis. Multiple biopsies from antrum of stomach of all the 160 patients were sent for histopathology. Reports showed that 38 patients were *helicobacter pylori* positive. All the 28 patients who had duodenal ulcer were positive for H.P and 10 out of 15 patients with gastritis were H.P positive (Table II).

TABLE II

Total Patients Endoscoped
160

	HP +ve	HP -ve
Duodenal Ulcer	28	0
Gastritis	10	5
Total	38	5

All the 38 H.P. +ve patients were given treatment for eradication of H.P. and anti-ulcer drugs. Only 12 patients with duodenal ulcer came for follow-up. Follow up endoscopy showed complete healing of ulcers in 7 patients and rest of the patients showed some improvement. Repeat histopathology for H.P. showed that only 2 patients are still H.P. +ve and rest of the patients become negative after having treatment for 6 weeks.

DISCUSSION

Nearly 14 years have elapsed since Marshall and Warren announced their findings that challenged many of the fundamental premises of gastroduodenal diseases. Evidence for the etiological role of helicobacter pylori has accumulated^{2,10}. Various studies confirms that Helicobacter pylori causes majority of cases of chronic gastritis and duodenal ulcers.

Prevalence of Helicobacter pylori infection in duodenal ulcer patients have consistently been found to be between 95% and 100%¹¹. The study carried by Tytgat & Rauws in Amsterdam on 200 duodenal ulcer patients over last few years showed 100% infection rate¹².

In our study, the prevalence of HP is 100% in duodenal ulcer and 66% in gastritis. The following two important lines of evidence support possible causal role of Helicobacter pylori.

- a) Helicobacter pylori is present in the antrum of virtually all persons with duodenal ulcer, provided they do not use nonsteroidal anti-inflammatory drugs or do not have Zollinger Ellison syndrome as a possible cause of ulcer.
- b) The treatment and eradication of Helicobacter Pylori dramatically reduces the frequency of ulcer recurrence, compared with treatment of ulcer with antiulcer drugs¹³.

Evidence however is obscured as to the causal role of Helicobacter Pylori in duodenal ulcer by the fact that infection is so common and the incidence of ulcer is not so. The rate of infection of Helicobacter pylori is as high as 90% in some countries¹⁴. Thus the role is central but not the only causative factor. Duodenal ulcer is obviously a multifactorial event. In addition to the microbial gastroduodenitis, there are many other disease modifiers, such as acid pepsin secretory potential, smoking and other genetic and environmental factors¹⁵.

Thus it is necessary to isolate the bacteria from the antral mucosa in duodenal ulcer patients as the prevalence of Helicobacter Pylori is almost 100%. This new understanding of the pathophysiology of duodenal ulcer will have dramatic effect on both treatment and diagnosis of these cases.

Elimination of Helicobacter Pylori has been clearly shown to alter the natural history of duodenal ulcer. Several studies have now shown that ulcer recur in a very small percentage of patients when Helicobacter Pylori is absent, compared with more than 70% recurrence when it is identified¹⁵.

CONCLUSION

The data has shown that the presence of Helicobacter Pylori is a condition necessary for the development of most peptic ulcers¹⁶. There seems to be no doubt that Helicobacter Pylori is a dominant factor in the multifactorial peptic ulcer diathesis.

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ASSESSMENT IN MEDICINE: A STUDY OF STUDENT ATTITUDES TO MEDICAL EXAMINATIONS

KHALID MAHMUD SHAH

ABSTRACT:

Various methods have been utilized to assess competence in Medicine. However, looking at these methods from the student's point of view, there is a dearth of information. It was decided to conduct a small survey (questionnaire type) of undergraduate and postgraduate students, eliciting their preferences for particular methods of assessment and their reasons for it. The results highlighted certain areas of conformity of opinion of both the groups, but it also identified certain aspects in which the opinions were at variance. This study has implications for course organizers who have to select different methods of assessment for course members. If a method, which the majority of students feel comfortable with, is utilized for assessment purposes then a better reflection of student ability would be achieved. It also seems logical to give a thought to the views of the students who are the "consumers" of Medical Education.

KEY WORDS: Medical Education, Assessment Methods.

INTRODUCTION

The Medical profession requires suitable methods to assess clinical competence of its members. Medical practitioner's competence is a combination of physician capabilities and activities.

It involves the activities of physician in diagnosing and managing a patient's problems as well as other activities such as attitudes or relationship with colleagues and other health professionals, participation in professional associations and scholarly or research activities. It is therefore important to assess all of the above physician's attributes to arrive at a fair assessment of his competence. This assessment starts at an early stage of physician's training as a medical student.

Researchers (Senior 1976)¹ have made a distinction between "competence" and "performance". The former implies what a physician is capable of doing and the latter means what a physician actually does in his day to day practice. The American Board of Internal Medicine (1979) outlines four dimensions which must be considered in defining competence:

1. Relevant abilities of physician's knowledge, technical skills and interpersonal skills.
2. Problem solving tasks: data gathering, diagnosis, and continuing care etc.
3. Nature of medical illness: problems encountered by the physician.
4. Social and psychological aspects of patients' problems.

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lems, especially those which relate to diagnosis and management.

It is important that methods utilized to assess the capabilities of a physician during his training should be targeted to the above-mentioned "dimension".

Review of literature concerning methods of assessment of clinical competence identified lack of research material on the conception and opinions of the undergraduate and postgraduate medical students with regard to the current methods of assessment. It was felt important to analyze the responses of the learners of medicine because they being "consumers" of medical education programs would be in the best position to comment on methods being utilized to assess the effectiveness of said programs.

MATERIALS AND METHODS

It was decided to conduct a survey of two groups of undergraduate and postgraduate students. Both groups were given a questionnaire (Appendix A) which respected the anonymity of the respondents. The questionnaire consisted of seven questions related to different aspects of assessment methods currently utilized at the University of Glasgow and in postgraduate diploma examinations and required the respondents to communicate their views. It was designed to elicit their preference for particular methods or combination of methods and their reasons for it.

The group of 45 undergraduates belonged to the 4th years MB ChB class of Glasgow University on their clinical teaching program in the Orthopedic Surgery Department. An equal number of postgraduates including residents, registrars and senior registrars working at

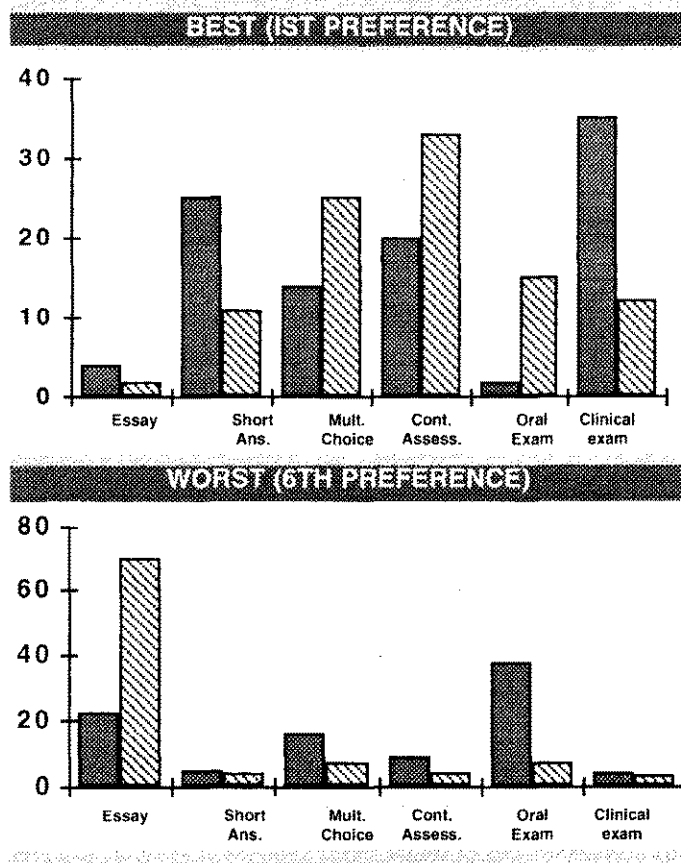
Western Infirmary Glasgow were approached and their responses were collected.

RESULTS

In response to the first question inquiring about the order of importance in which they would place different methods in assessing a medical students theoretical knowledge (Figure 1), 36% undergraduates considered Clinical Examination to be the best method in assessing a medical student's theoretical knowledge. Whereas 35% postgraduates thought Continuous Assessment was the best way of assessing theoretical knowledge. 36% undergraduates considered "Oral Examination" to be the worst method while 8% postgraduates thought this was the second worst. To 73% postgraduates "Essays" were the worst method of assessing theoretical knowledge, while to 29% undergraduates "Essays" were the second worst.

FIGURE 1

Q1. What order of importance would you place the following methods in assessing a Medical Students theoretical knowledge?



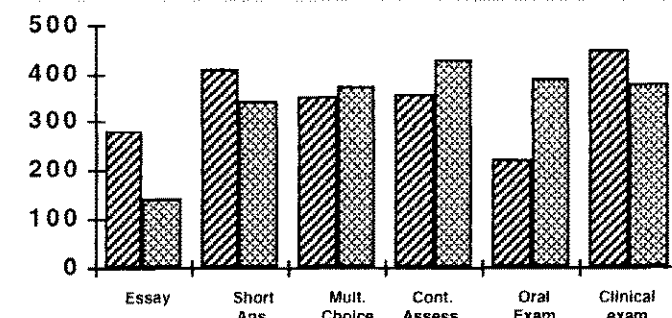
The responses were also analyzed by "Accumulated Scoring" method. 6 points were apportioned to the first preference while 5 points were given to the second preference.

Similarly 4, 3, 2 and 1 points were awarded to 3rd, 4th, 5th and 6th preferences. The "Accumulated Scores" were then calculated for each option (Essays, Short Answers, Multiple Choice, Continuous Assessment, Oral Examination and Clinical Examination) for undergraduates as well as postgraduates (Figure 2). Accumulated scoring method showed that Clinical Examination and short answer were considered the top two methods in assessing a medical students theoretical knowledge by the undergraduates while the postgraduates considered Continuous Assessment and Oral Examination as the best two methods.

Second question in the questionnaire required the respondents to give a combination of 3 methods in the order of their preference that they felt was the best combination to give an overall assessment of medical student's ability.

FIGURE 2

Accumulated scoring of methods of assessing medical students theoretical knowledge (Q1)



A wide variety of combination of methods were suggested but by calculating the percentages of each method appearing in the combinations suggested by the respondents, a list (Table I) in decreasing frequency was prepared. It was logical to select the three top methods as making up the best combination of methods for overall assessment of medical students' ability. There was surprising conformity between the undergraduate and postgraduate preferences for such a combination. Both groups suggested inclusion of "Clinical Examination" (Undergraduate: 93%, Postgraduate: 88%), and "Continuous Assessment" (Undergraduate: 57%, Postgraduates: 69%). The third component of the combination suggested by the Undergraduates was "Short Answers (60%) while the postgraduates thought that "Oral Examination" (62%) would be suitable.

There was a unanimity of view (Table II) on the necessity of a combination of methods for assessment of medical students. About 93% of respondents in both the groups were in favour of a combination of assessment methods.

TABLE I Appearance of each method in the suggested combinations- A list in decreasing frequency (Q2)

Undergraduates	%	Postgraduates	%
Clinical Examination	92.85	Clinical Examination	88.46
Short Answers	59.52	Continuous Assessment	69.23
Continuous Assessment	57.14	Oral Examination	61.53
Multiple Choice	45.23	Short Answers	42.30
Essays	30.95	Multiple Choice	38.46
Oral Examination	11.90	Essays	0.0

TABLE II

Q 3. Is a combination of assessment methods necessary ?

	Yes
Undergraduate	92.85%
Graduate	96.15%

Q 5. Do you feel that current methods of assessment are adequate ?

	Yes
Undergraduate	66.66%
Graduate	69.23%

Q 6. Do you feel that different sections of the Medical curriculum need different methods of assessment ?

	Yes
Undergraduate	92.85%
Graduate	92.30%

To the question which inquired about the method of assessment they felt they were good at, a high proportion of both the undergraduates (31%) and postgraduates (27%) thought they were best at multiple choice questions while 21% of undergraduates responded Continuous Assessment was their best suit. 23% of the postgraduates thought they were good at "Clinical Examination". Oral Examinations (33%) came out the worst method for the undergraduates while 62% of the postgraduates considered they were worst in responding to the Essay type questions (Figure 3).

Analysis of question 4 by the accumulated scoring method showed that Clinical Examination and Multiple Choice figured as the top two methods for the undergraduates while Clinical Examination and Continuous Assessment were the top methods for the Postgraduates (Figure 4).

There was a relative complacency (Table II) about the current methods of assessment being employed at the University, because a high proportion, about 35% of the respondents, considered them adequate. 67% of the undergraduates and 60% of the postgraduates consid-

FIGURE 3

Q4. Which method of assessment do you feel you are best at?

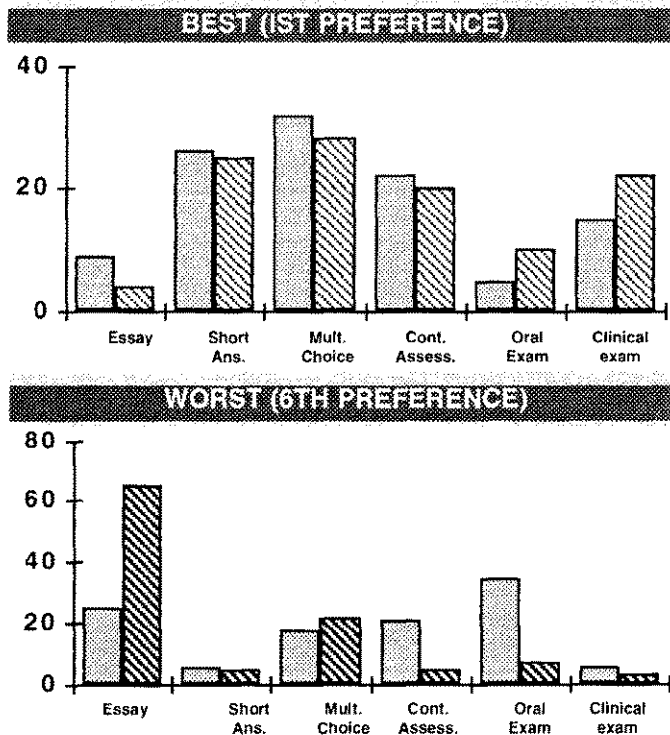
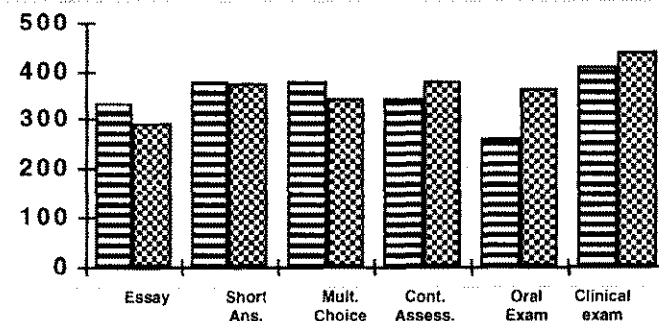


FIGURE 4

Accumulated scoring of methods of assessments students feel they are best at (Q4)



ered them to be inadequate.

A high proportion (Table II) of the respondents (93% undergraduates and 92% postgraduates) believed that different sections of the Medical curriculum needs different methods of assessment.

To the question, which method of assessment in their opinion was best for assessing Medical Student in Orthopedic Surgery, (Table III) surprisingly high proportion (43%) of undergraduates thought Clinical Examination on

its own was the best method, while 29% considered a combination of methods was the best way. This contradicted undergraduates earlier unanimity in favouring a combination of methods (Table II) for assessment of Medical Students. Among the Postgraduates the response was more predictable with 62% considering Combination of Methods as the best way of assessing while only 12% thought Clinical Examination on its own adequate.

TABLE III Which methods do you think are best in orthopaedics?

Undergraduates	%	Postgraduates	%
Clinical Examination	42.85	Combination of Methods	61.55
Combination of Methods	28.57	Clinical Examination	11.53
Continuous Assessment	14.28	Short Answers	7.69
		Continuous Assessment	7.69
Short Answers	11.90	Multiple Choice	3.84

DISCUSSION

Analysis of responses to the Survey questionnaire identified a certain unanimity of opinion in certain areas between the undergraduates and postgraduates. It also highlighted a difference in perceptions of methods of assessment for Medical Education.

Traditionally, amongst the Medical Educators the belief is very strong that "Theoretical Knowledge" component is best assessed by "Multiple Choice" type of method, because it is perceived to be more "factual" than other attributes sought in a Medical Practitioner. It was surprising to note that Multiple Choice format did not figure very highly amongst the responses from the undergraduates, only 14% considered it the best method in response to question 1. Postgraduates response was more in conformity with the traditionally held belief with 27% considering it as the best method. But it seems the two most appropriate methods for assessing theoretical knowledge as per undergraduate and postgraduate perceptions are "Clinical Examinations" and "Continuous Assessment". They also believe that the worst method for the above purposes is the "Essays" (Figure 1). There is ample support for the above belief in the Medical Education literature, as far as Essays are concerned. Essays are not considered a valid method for measuring theoretical knowledge. There was a unanimity of opinion for the necessity of combination of methods for assessment in Medical Education by both the undergraduates and postgraduates (Table II). This perception is also supported by different researchers (Neufeld and Norman 1985)², who have looked into the problem. There was also a surprising conformity among the three methods suggested for the combination. Both groups recommended "Clinical Examination" and "Continuous Assessment", while undergraduate wanted the inclusion of "Short Answers" as the

third entity, the postgraduates were in favour of "Oral Examination" (Table I).

It seems that both undergraduates and postgraduates think they do well in Multiple Choice, Clinical Examination and Continuous Assessment methods, but are not good at Essays and Oral Examination. (Figure 4) These findings have important implications for "Course Organizers" who have to select suitable methods to assess students taking part in their courses. If methods which the majority of students feel they are comfortable with, are selected for assessment then a better reflection of student ability would be achieved. It also seems logical to give a thought to the views of the students who are the "consumers" of Medical Education.

35 percent of the respondents were satisfied with the current methods employed for assessment in the university, although the majority believed that they were inadequate (Table II). There are three perceptions with regard to the assessment methods, those of the Medical Teachers, Educationalists and the Medical Students. It would seem appropriate to consider all the three views together for a balanced approach to this important aspect of Medical Education.

Undergraduates as well as the postgraduates were overwhelmingly in favour of the concept that different sections of the Medical Curriculum require different methods of assessment. (Table II) To the question which inquired about the best method for assessment in Orthopedics, the opinion amongst the undergraduates and postgraduates was equally split between Combination of Methods and Clinical Examination only (Table III).

One of the intriguing facts that came out from the analysis of the results to this questionnaire, was the fact that there was no positive correlation between the responses for question one and four. 62% of the respondents believed that the method which they considered was the best for assessing Medical students theoretical knowledge, was not the one they themselves were good at. It would be interesting to explore further this aspect of the study to establish where and why these perceptions arise and its effect on the students' assessment.

The above study, although small, was also interesting because of its conformity of opinion between undergraduates and postgraduates as well as variance on certain issues. This variance could be a reflection of the postgraduates acquiring a better insight into the profession with their practical experience or it could be attributed to conforming to the views of their peers in the profession and the influence of their views on the subject.

It seems it would be interesting to repeat this study among the undergraduates when they graduate in two years time

and analyze their response to the same questions at that time, to see if their opinions undergo any change.

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APPENDIX - A

MEDICAL STUDENT ASSESSMENT

Q1. In what order of importance would you place the following methods in assessing a medical student's theoretical knowledge ?

1 Essays

☐

2 Continuous Assessment

☐

3 Short Answer

☐

4 Oral Examination

☐

5 Multiple Choice

☐

6 Clinical Examination

☐

(PLEASE LIST IN ORDER 1-6)

Q2. Which do you feel is the BEST COMBINATION to give an overall assessment of Medical Student ability ?

1 Essays

☐

2 Continuous Assessment

☐

3 Short Answer

☐

4 Oral Examination

☐

5 Multiple Choice

☐

6 Clinical Examination

☐

(PLEASE LIST 3 IN ORDER OF IMPORTANCE)

Q 3. Is a combination of assessment methods necessary ?

☐ YES

☐ NO {PLEASE TICK (✓)}

Q 4. Which method of assessment do you feel you are best at ?

1 Essays

☐

2 Continuous Assessment

☐

3 Short Answer

☐

4 Oral Examination

☐

5 Multiple Choice

☐

6 Clinical Examination

☐

(PLEASE LIST IN ORDER 1-6)

Q 5. Do you feel that current methods of assessment are adequate ?

☐ YES

☐ NO {PLEASE TICK (✓)}

Q 6. Do you feel that different sections of the Medical curriculum need different methods of assessment ?

☐ YES

☐ NO {PLEASE TICK (✓)}

Q 7. Which methods do you think are best in Orthopaedics ?

1 Essays

☐

2 Continuous Assessment

☐

3 Short Answer

☐

4 Oral Examination

☐

5 Multiple Choice

☐

6 Clinical Examination

☐

(PLEASE LIST 2 IN ORDER OF IMPORTANCE)

PERSONAL DETAILS

a) Year of Graduate _____ OR Year of Medical School _____

b) Male Female (Please Circle)

c) Previous Intercolated Degree.

☐ YES

☐ NO {PLEASE TICK (✓)}

PAEDIATRIC SURGICAL PATIENTS' EXPENDITURES: A SURVEY

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ABSTRACT

A survey in the form of interviews was carried out on all those paediatric surgical patients who were offered free surgical service at the Children Hospital, PIMS. The period of study was three weeks in which parents of 623 patients were interviewed, for their income. This was compared against the amount of expense that was incurred for one hospital treatment. Average expenditure came out to be Rs 10,137/-, despite the impression that these patients are offered entirely free treatment in a general government hospital. This amount was much larger than the average monthly income of a family. Details of the results are presented.

KEY WORDS: Surgical Expenditure.

INTRODUCTION

Being a third world country with limited resources, Pakistan has a health care system which provides inadequate services. This is particularly true in rural areas and people have to come to big cities in order to seek treatment, whenever there is a problem beyond the scope of local health care providers. This has a lot of impact on the socio-economic state of these people. Illiteracy and large families with a single earning hand add further to the problem. Quacks and traditional healers are taking advantages of this situation. It is impossible to provide health services absolutely cost-free. Majority of our people belong to lower socio-economic class and thus can not bear the expenses. People sell off their ancestral property, agriculture land, animals and personal belongings to generate money in order to meet the expenses of medical treatment.

The Pakistan Institute of Medical Sciences (PIMS) is a government hospital in Islamabad. Here no fee is charged for emergency services, medical consultation, nursing care, investigations, operation theater utilities, anaesthesia equipment and material and intensive care. In spite of this, a lot of money is spent by the patient on medication, intravenous fluids, cannulae, suture materials etc, which the hospital cannot provide because of lack of funds. In addition, the patients coming from outside Rawalpindi / Islamabad have to spend on travelling, accommodation, food, etc. Absence of one or both parents from work causes further monetary burden on daily wage earners. This survey was conducted to calculate the amount a family spends for surgical treatment at PIMS.

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MATERIALS AND METHODS

A survey was conducted in the Children hospital, PIMS Islamabad. Patients visiting the outpatient department of Paediatric surgery from 24 July to 15th August 1996 (23 days) were included in the study. A questionnaire was designed and 623 parents of patients were interviewed. The results were analyzed with the help of "Epi Info 6", a word processing, data base and statistics program for public health.

RESULTS

Two third of the patients visiting the paediatric surgical outpatient department belonged to local population of Rawalpindi / Islamabad, whereas one third came from other cities of Punjab, North-Western Frontier Province, Azad Jammu and Kashmir or were Afghan refugees.

According to the average monthly income of the families they were divided into low and high socio-economic groups. An average monthly income of Rs 5,000/- was considered as the dividing points. 483 (78%) families had monthly income less than or equal to Rs 5,000/-, while 140 (22%) families had an average monthly income of more than Rs 5,000/-.

Forty six patients of the families interviewed had undergone some sort of surgery (major or minor). It was found that the average expense of surgery incurred by the family of each of these patients was Rs. 10,137. Thirty five (76%) of these patients belonged to the lower socio-economic group.

DISCUSSION

Pakistan spends only two percent of its revenue budget on health. This is about one fifth of what other developing

countries are spending on their nation's health¹. Priorities in other sectors have restricted successive governments to increase the health budget. The per capita income is \$ 395 per annum and only 0.6% of the per capita income is spent on health¹. Entire free health care services are not provided in any part of Pakistan, and most of the time, people have to spend money from their own pocket to get treatment. Due to non-affordability, many patients do not get adequate treatment. They are usually lost to follow-up and fail to take medications properly, especially those who are on expensive medicines for a longer period of time. Some of them also seek medical advice from quacks, or other traditional healers, which is less expensive. They may also go to the mazars (mausoleums) for help. These services are not free at all, but because of monetary constraints and long distances, many patients with chronic ailments requiring expensive allopathic medicines choose these options.

The average number of childrens per family in our study was found to be 3.7 and an average family consisted of 7.3 members. Majority of these families (78%) belonged to the low socio-economic group. It was calculated that in this group only Rs 389 per month were available for each individual. This is a very meager amount of money to buy all the necessities of life for an individual for one month.

PIMS is a government hospital and as expected it was found that majority of our patients belonged to the low socio-economic group. The average cost of a surgical procedure in our study was Rs. 10,137 which is nearly 3.5

times the average monthly income of a family belonging to the lower socio-economic group. This figure includes medications, intravenous fluids, cannulae, sutures, traveling, accommodation, food and other minor expenses, which are usually not taken into consideration while calculating the money required for a certain surgical procedure or any other mode of treatment. One third of the patients interviewed had come from outside Rawalpindi / Islamabad and these are the ones who suffer most in terms of financial difficulties. This is the reason why so many people can not afford treatment even in the institutions where emergency services, medical consultation, nursing care, investigations operation theater utilities, anaesthesia equipment and material and intensive care are provided free of cost.

Extensive studies of this type should be carried out in all hospitals which would help us in understanding our health problems in a better way and will assist in the planning, as well.

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KOCKS ABDOMEN IN AFGHAN REFUGEES

ABDULLAH JAN JAFFAR

ABSTRACT

Over a period of 3 years (Jan. 1994 to Dec. 1996) 600 Afghan refugees were admitted in Surgical Unit I of Sandeman Hospital Quetta with acute abdominal pain and vomiting. Seventy percent were found to have abdominal Kocks' and 60% of these had pulmonary Kocks as well. Male/Female ratio was 1:7.

KEY WORDS: Tuberculosis, Intestinal obstruction.

INTRODUCTION

During Afghan war in the eighties and early nineties, a large number of refugees from Afghanistan came to the province of Baluchistan. With this influx of poor, malnourished refugees, the number of cases of Tuberculosis of abdomen reporting to the provincial hospital at Quetta increased. It also included more than usual local patients as well. Possible routes of infection include direct invasion by ingested organisms, haematogenous seeding, and extension from contiguous organs. After the patient ingests the organism, the bacillus enters the small bowel where the site of infection appears influenced by physiological stasis. The most common site is Ileum, Ileocaecal region, Colon, Jejunum, and Duodenum.

RESULTS

40% of the patients included in the study had miliary tuberculosis. 20% had pulmonary and purulent type of abdominal Kocks'. 20% had fibrinous type of abdominal Kocks' with pulmonary kocks. Rest of the patients had intestinal Kocks', with 10% hypertrophic type and 10% ulcerative type. Caseation was found in most cases in the lymph nodes. 3 cases of ileal perforation were also seen. At laparotomy, gut loops were carefully separated and resection where necessary was done; obstructing lesions and bands were lysed. Peritoneal Cavity washed with Streptomycin solution and abdomen was closed in layers. Patients were put on INH, Ethambutol and Rifampicin for 9 months with good results. 10% of the

patients formed faecal fistulae, mostly on the 4th day with bad prognosis.

DISCUSSION

Poor, malnourished Afghan refugees living in unhygienic conditions, without medical aid are the natural victims of Kocks' disease, pulmonary and abdominal. The local population was less affected before the arrival of Afghan refugees, but now the ratio of refugees to local patients was 10:1. This is perhaps due to their missing with the local population

These patients reached the hospital in a very poor condition and needed several days of interim therapy and hyperalimentation before surgery. Cases fit for surgery show better results than non-operated cases and respond very well to anti-tubercular drugs.

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EPIDEMIOLOGY OF PRIMARY BONE TUMOURS A TEN YEARS STUDY AT JPMC

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ABSTRACT

This is a retrospective study, conducted in the Department of Orthopedic Surgery, Jinnah Postgraduate Medical Centre, Karachi from 1986 to 1996. Total number of patients included in this study were 273. Male to female ratio was 2:1. There were 117 benign and 156 malignant lesions. Femur was the most commonly affected bone. Osteochondroma was the most common benign neoplasm found in 76 cases. Among malignant lesions, Giant cell tumour occurred in 68 cases.

KEY WORDS: Epidemiology, Primary Bone Tumours

INTRODUCTION

Bone tumours are rare. In North America, primary bone tumours account for approximately 0.1 % of all new cancer cases and 0.2% of all cancer deaths; percentages are approximately the same for other parts of the world. Such epidemiological statistics have not been collected for Pakistan. However, similar data for major teaching hospitals of the country can give an approximate assessment of the primary bone tumour scenario at the national level. The present study conducted at JPMC is a beginning.

PATIENTS AND METHODS

This is a retrospective study conducted in Orthopedic Department of J.P.M.C., Karachi, from December 1986 to December 1996.

In all the patients, with provisional diagnosis of primary bone tumors clinical assessments, hematological and radiological examinations and radioisotope bone scans were performed. Where indicated, CT scan and MRI were done. After all these investigations, biopsy was taken. On the basis of biopsy reports, lesions were grouped into benign and malignant, each of which were categorized according to age, sex and site of lesion.

RESULTS

Out of total 273 cases in this study, 117 (42.85 %) were benign tumours and 156 (57.14%) were malignant. Male patients were 180 (66%) and females were 93 (34%). Femur was the bone most commonly involved bone followed by tibia. Osteochondroma was the most common

benign tumour, noted in 74 patients (63.24%), followed by aneurysmal bone cyst (Table I). Giant cell tumour was the most common malignant lesion, noted in 68 patients, followed by Osteosarcoma (Table II) and III, IV, V, VI.

TABLE I Benign Tumours (n = 117)

Tumour	No.	%
Osteochondroma	74	63.24
Aneurysmal Bone Cyst	13	11.11
Enchondroma	9	7.69
Fibrous Dysplasia	9	7.69
Osteoid Osteoma	5	4.27
Chondromyxoid Fibroma	3	2.56
Eosinophilic Granuloma	2	1.7
Non-Ossifying Fibroma	1	0.85
Unicameral Bone Cyst	1	0.85

TABLE II Malignant Tumours (n = 156)

Tumour	No.	%
Giant Cell Tumour	68	43.58
Osteosarcoma	34	21.79
Chondrosarcoma	25	16.02
Ewing's Sarcoma	19	12.17
Multiple Myeloma	5	3.21
Malignant Fibrous	3	1.92
Histiocytoma Of Bone		
Chordoma	2	1.28

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TABLE III			BENIGN TUMOURS			
			Age sex distribution			
Tumours	Male	Female	Y E A R S			
			0-10	11-20	21-40	40-65
Osteochondroma	55	19	05	58	11	-
Aneurysmal Bone Cyst	06	07	03	04	04	02
Enchondroma	06	03	-	05	02	02
Fibrous Dysplasia	03	06	-	07	02	-
Osteoid Osteoma	04	01	01	02	02	-
Chondromyxoid Fibroma	02	01	-	-	03	-
Eosinophilic Granuloma	01	01	-	-	01	-
Unicameral Bone Cyst	-	-	-	-	01	-
Non Ossifying Fibroma	01	-	01	-	-	-

TABLE IV			BENIGN TUMOURS						
			Bone Involved						
Tumours	Femur	Tibia	Humerus	Pelvis	Scapula	Phalanx	Radius	Ulna	Others
Osteochondroma	26	19	11	-	02	07	01	01	07
Aneurysmal Bone Cyst	04	04	02	-	01	-	-	-	02
Enchondroma	02	03	01	-	-	02	-	-	01
Fibrous Dysplasia	04	04	-	-	-	-	-	-	01
Osteoid Osteoma	02	-	01	-	-	02	-	-	-
Chondromyxoid Fibroma	-	02	-	-	-	-	-	-	01
Eosinophilic Granuloma	01	-	-	-	-	-	-	-	01
Unicameral Bone Cyst	-	-	01	-	-	-	-	-	-
Non Ossifying Fibroma	01	-	-	-	-	-	-	-	-

TABLE V			MALIGNANT TUMOURS				
			Age sex distribution				
Tumours	Male	Female	Y E A R S				
			0-10	11-20	21-30	31-40	40-65
Giant Cell Tumour	31	37	14	-	-	44	10
Osteosarcoma	28	06	18	08	08	06	-
Chondrosarcoma	18	07	06	10	10	03	06
Ewings Sarcoma	15	04	13	04	04	-	-
Multiple Myeloma	04	01	-	-	-	02	03
Malignant Fibrous Histiocytoma	03	-	-	01	01	01	01
Chondroma	02	-	-	-	-	01	01

TABLE VI			MALIGNANT TUMOURS						
			Bone Involved						
Tumours	Femur	Tibia	Humerus	Pelvis	Scapula	Radius	Ulna	Phalanx	Others
Giant Cell Tumour	20	22	08	01	-	04	04	03	06
Osteosarcoma	16	14	02	02	-	-	-	-	-
Chondrosarcoma	08	02	01	09	02	-	-	-	03
Ewings Sarcoma	04	03	01	07	02	-	-	-	02
Multiple Myeloma	02	-	-	02	-	-	-	-	02
Malignant Fibrous Histiocytoma	-	01	-	-	-	-	-	-	-
Chondroma	-	-	-	02	-	-	-	-	-

DISCUSSION

Benign bone tumours are classified by the type of neoplastic tissue within the lesion. WHO has described seven categories of benign bone tumour. There are other tumour like conditions which are included in the classification of benign bone tumours by Stevin Gitelis¹. These lesions include fibrous dysplasia, aneurysmal bone cyst, simple bone cyst, non-ossifying fibroma and eosinophilic granuloma. We have also included these lesions in the benign bone tumours. Giant cell tumour is classified as a locally malignant tumour² although Stevin Gitelis⁴ has included this tumour in benign conditions. We have included this tumour in malignant conditions, because of its frequent recurrence and in some cases it does metastasise.

In this series, osteochondroma was the most common benign tumour, accounting for 63.24% of all benign primary bone tumours. In literature, osteochondroma makes upto 44 % of all benign tumours and 20% of all primary bone tumours¹. The tumour is more common in males whereas in our series male to female ratio is 2.8 to 1. In our series 60.8 % of cases were noted around knee joint, whereas in literature 36 % of cases were seen there. Aneurysmal bone cyst was mainly noted in 2nd and 3rd decades of life, whereas in literature, it is rare in 3rd decade¹.

In our series, giant cell tumour was the most common primary malignant bone tumour and constitutes 43.6 % of all primary malignant skeletal neoplasm. In other series it was 5% of all primary skeletal neoplasms⁴. In our series, osteosarcoma constitutes 21.8 % of all primary tumours and 58.5% of these tumours were seen below 20 years of

age. According to Bernard Ghelman⁷, osteosarcoma makes up 25 % of all the primary malignant bone tumours, and 75 % of cases are below 20 years of age. In literature⁶, this tumours is slightly more common in males, but in this series male to female ratio is 4.7:1, and in another series male to female ratio was 1.5:1⁸. Incidence of Ewing's sarcoma was relatively higher than other series

In conclusion, our study has highlighted salient features in relation to bone tumours at our institute. Multi-centre studies of this type will help in monitoring tumour registry; according to which future planning can be done as to management in our country and uniformity in reporting the results can be expected.

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ECTOPIA CORDIS AND ITS VARIANT

Case Reports

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ABSTRACT

Ectopia cordis is a rare congenital anomaly. We report three cases of ectopia cordis, two of them being of the ectopia cordis nuda variety. Two patients died following surgery. One patient who survived, was lost to followup.

KEY WORDS: *Ectopia cordis*

INTRODUCTION

Ectopia cordis is an extremely rare condition which results from fascinating embryological errors. Most cases do not survive and only a few successful corrections have been reported. It was first reported by Stenson in 1671, and was also interestingly the first reported case of tetralogy of Fallot¹. The heart is located partially or totally outside the thorax in this anomaly. The basic defect postulated in this abnormality is the absence of ventral midline mesenchymal tissue into which the migrating mesodermal structures would usually grow. The sternum develops in the sixth week of intrauterine life, as independent concentrations of mesenchyme in two parallel primordia, away from midline. Later on they progressively chondrify and converge superiorly to the mid ventral line, fusing with each other and forming a median cartilaginous plate².

Etiology is still unknown but sternal defects have been produced in rats with certain teratogenic agents, such as benzalkonium chloride³ and diamethadone⁴. Platinum thymine blue (The anti-tumor agent)⁵, chromosomal abnormalities⁶ and the ruptured amnion syndrome⁷ have also been implicated. Three such cases are reported here, who were managed between 1987-1993 at Children Hospital, Pakistan Institute of Medical Sciences, Islamabad.

CASE REPORTS

CASE No. I:

A male baby was born with herniated heart having ventral sternal defect and an exomphalos. At operation deficient pericardium (nuda), left ventricular diverticulum and an anterior diaphragmatic hernia were seen. (Fig. 1). The ventricular diverticulum was excised, heart replaced into

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the thoracic cavity and the anterior diaphragmatic hernia and exomphalos were repaired. The sternal defect was left as such and skin was closed. The patient died of cardiac arrest 48 hours after surgery.



Fig. No. 1. Note ectopia cordis nuda with bare heart, protruding through the ventral sternal defect. Patient also had left ventricular diverticulum, exomphalos and Morgagni hernia.

CASE No. II:

A male patient was born with thoraco-abdominal type of ectopia cordis nuda (Fig. 2). He had a large epigastric exomphalos with cephalic orientation of the cardiac apex and a single ventricle. The exomphalos was repaired and heart was replaced in the thoracic cavity, giving it only a skin cover. The patient died of cardiac arrest 12 hours postoperatively.



Fig. No. 2. Ectopia cordis nuda with cephalic orientation of the cardiac apex. He also had large epigastric type of exomphalos.

CASE No. III

This male patient was born with incomplete ectopia cordis, a ventral sternal defect with partially herniated heart and an epigastric exomphalos. The ectopia was covered with skin only (Fig.3). On echocardiogram a ventricular septal defect was also noted. Only exomphalos was repaired. The patient was discharged after 10 days. After a year he was lost to followup.



Fig. No. 3. Covered ectopia cordis with a ventral sternal defect and interventricular septal defect.

DISCUSSION

Four types of ectopia cordis, cervical, thoracic, thoracoabdominal and abdominal have been described. The term ectopia cordis nuda or "the naked heart" has been coined due to absence of skin and pericardium covering the heart. For practical purpose, only the thoracic and thoracoabdominal type are in the true sense considered as ectopia cordis variety. The other two types are associated with sternal clefts and intact skin⁸. Among the 224 cases of ectopia cordis reported in literature to date, 197 are described well enough to be classified as 6 cervical, 126 thoracic, 36 thoracoabdominal and 29 abdominal. The hearts were uncovered in 41% cases (ectopia cordis nuda), covered with serous membrane in 31% cases and covered with skin in 27%⁹ cases.

The thoracic type is characterized by a sternal defect, absence of parietal pericardium, cephalic orientation of cardiac apex, epigastric omphalocele, diastasis of recti and a small thoracic cavity.

The thoracoabdominal variety, also known as Pentology of Cantrell, consists of a distal cleft sternum, omphalocele-like anterior abdominal defect, a crescentic midline anterior diaphragmatic defect, free pericardio-peritoneal communication and intrathoracic congenital heart disease¹⁰. Rarely there may be no diaphragmatic defect, but the diaphragm is eventerated. Such patients have prolonged survival. Occasionally there may be intact skin as in our Case No. III with only a partially exposed heart.

Ectopia cordis is associated with various congenital heart defects, the most common being ventricular septal defect. A host of other cardiac anomalies ranging from Tetralogy of Fallot to varying isolated cardiovascular abnormalities of the heart and the great vessels can be seen. Only 5 cases of ectopia cordis (thoracoabdominal) without congenital heart disease have been reported.

The preoperative assessment of an infant with ectopia cordis should include careful auscultation as well as an echocardiogram to identify possible cardiac anomalies. All cases of ectopia cordis should undergo immediate surgery for congenital heart disease and anterior chest wall defects¹¹.

It is obvious that in thoracic ectopia cordis the small chest cavity is the basic problem. Due to this, the anterior chest wall attempts to come beside the heart, thereby resulting in thoracic ectopic cordis. Koop and Saxena essentially built the chest around the heart, rather than attempting to put the heart inside the thoracic cavity. Efforts to put the heart into the small chest cavity have been made in the past but have never succeeded because of the development of tamponade or kinking of vessels⁸. Jones et al sug-

gested that all cases of complete thoracic ectopia cordis should undergo immediate surgery for their congenital heart disease. The anterior chest wall should be reconstructed and exomphalos if present must be repaired and reconstructed later¹². This defect can be closed by acrylic prosthesis. To prevent compression and kinking of great vessels, the diaphragm should be detached from the thoracic wall and fixed lower down².

The first successful treatment of thoracoabdominal ectopia cordis as reported by Scott¹³ was performed by Brock in 1950. As thoracoabdominal ectopia cordis is associated with a ventral diaphragmatic defect, treatment would involve its repair as well as repair of the omphalocele or epigastric hernia.

Management of these defect involves a multidisciplinary approach with facilities for cardiac surgery. There are centers where the complete correction of the defects of Cantrell's Pentology have been performed at one stage, with reported success. However, in most centers staged repair of this condition is practiced. Despite these surgical measures, success and long term survival is extremely uncommon. Of the 138 patients in the literature who have documented records, 23 were still-born, whereas 42 died on the first day of life. Only 32 are known to have survived for more than a month. Nineteen survived infancy and were alive at the time their cases were reported while 7 are known to have reached adolescence⁹. The oldest patient having survived this condition was 75 years old⁴. Of the three cases seen at our hospital, only one case had a minor external defect and no serious cardiac abnormality and was managed successfully.

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CARCINOMA OF THE COLON COEXISTING WITH TUBERCULOSIS

Case Report

SALIM SOOMRO, SHAH ZAMAN, A. MAJEED BALOCH

ABSTRACT

Intestinal tuberculosis occurring with Colonic cancer is an uncommon event and presents an interesting patho-aetiological relationship. Two cases of abdominal tuberculosis occurring together with colonic cancer are presented. One was 36 years old male and another was 60 years old female. Both cancers were moderately differentiated adenocarcinomas and staged DUKES B. One of the tumors occurred in Caecum and other was present in ascending Colon. Tuberculosis was found immediately adjacent to the tumor plaque and regional lymph nodes showing Chronic granulomatous inflammation, but no evidence of metastasis. Both patients had colonoscopy and biopsy of the colonic lesions prior to surgery. Right hemicolectomy was done in both the cases. Both patients received chemotherapy for tuberculosis and Cancer. The exact relationship of abdominal tuberculosis with colonic cancer is speculative but the possibility of a cause and effect relationship exists.

KEY WORDS Tuberculosis Colon, Carcinoma Colon

INTRODUCTION

Tuberculosis has afflicted mankind since prehistoric times¹. Rakitansky worked on intestinal tuberculosis and described the tubercle formation in the intestinal wall². Abdominal tuberculosis remains a common problem in the impoverished areas of the world. While colonic cancer is related to a high degree of industrialization and socio economic standards³, colonic tuberculosis is currently rare in our country. Its co-existence with colonic cancer is an uncommon event and presents an interesting patho-aetiological relationship⁴.

PATIENTS AND METHODS

This study was carried out in Surgical Unit II, Jinnah Postgraduate Medical Centre Karachi, a major tertiary hospital of the country. Both patients were admitted from outdoor department of the unit. Right sided abdominal mass was present in both the patients. All the pre-operative investigations including colonoscopy and biopsy were done. Right hemicolectomy was performed in both the patients after bowel preparation. Complete course of Chemotherapy for tuberculosis and Cancer was given.

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RESULTS

Two cases of colonic carcinoma co-existing with tuberculosis are reported. One was 36 years old male and another was 60 years old female. Both patients had colonoscopy and biopsy prior to surgery. Adenocarcinoma was reported on colonoscopic biopsy, but no evidence of tuberculosis was shown. One of the tumor occurred in Caecum and other was present in ascending colon. Both patients had right hemicolectomy. Histopathology revealed moderately differentiated adenocarcinomas staged DUKES B in both the cases. Tuberculosis was found immediately adjacent to the tumor plaque and regional lymph nodes showing chronic agranulomatous inflammation, with no evidence of metastasis. Complete courses of Chemotherapy for tuberculosis and cancer given. Both patients were followed up for 14 months and are well.

DISCUSSION

Large bowel obstruction is caused by a variety of conditions. Obstruction is commonly the result of carcinoma, which accounts for about 90% of patients⁵. Less common causes include diverticular disease, ischaemic strictures and inflammatory bowel disease⁶.

Tuberculosis and adeno-carcinoma coexisting in the colon is exceptionally rare⁷. 26 similar cases has been reported in Japanese literature⁸, with a female male ratio of 17:9. The most characteristic histological finding was a well differentiated adeno-carcinoma with a tendency to produce mucin. This may suggests the possibility that the cancer originated in a tuberculosis lesion.

Maruta and Tanaka reported 2 similar cases⁹. They found carcinomatous lesions adjacent to scarred areas of ulcerative tuberculosis. It is interesting that such carcinomas are derived from a chronic inflammatory process with repetition of erosion, ulcer and consequent regeneration. These findings suggest that ulcerative lesions of tuberculosis may be precursors of carcinomas.

Jain and Chandra reported four cases of co-existing tuberculosis and carcinoma of the colon¹⁰. All the four patients were females. Right colon was involved in three patients while one patient had involvement of transverse colon. Mucinous carcinoma was the pre-dominant type seen in three patients. The presence of carcinoma with colonic tuberculosis signifies the need for epidemiological and histopathological investigations into the etiologic relationship between the two diseases.

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OMENTAL GRAFTING OF FOREARM

A CASE REPORT

AKHTAR ALI TAHIR, SYED HAMID ALI SHAH

ABSTRACT

A 45 year old female sustained an extensive left forearm injury in a road accident. Only a few muscles were left in the extensor compartment, but the skin was totally lost. Greater omentum was mobilised through a minilap to cover the extensive raw area including exposed bones and tendons and to bring nutrition to the ischaemic hand. It was covered with partial thickness skin graft. Successful take of graft resulted. We recommend use of omentum in such injuries with excellent cosmetic results.

KEY WORDS: *Omental Grafting , Forearm.*

CASE REPORT

A 45 years old female, who sustained motor vehicle accident, was admitted in emergency. There was complete loss of skin of the left forearm and dorsum of hand. Only few muscles were left in the extensor compartment of the forearm and bones were exposed. Tendons on the dorsum of the hand were also exposed. Finger tips were pale and cold which became gangrenous after 48 hours. An amputation was advised but the patient refused (Fig-1).

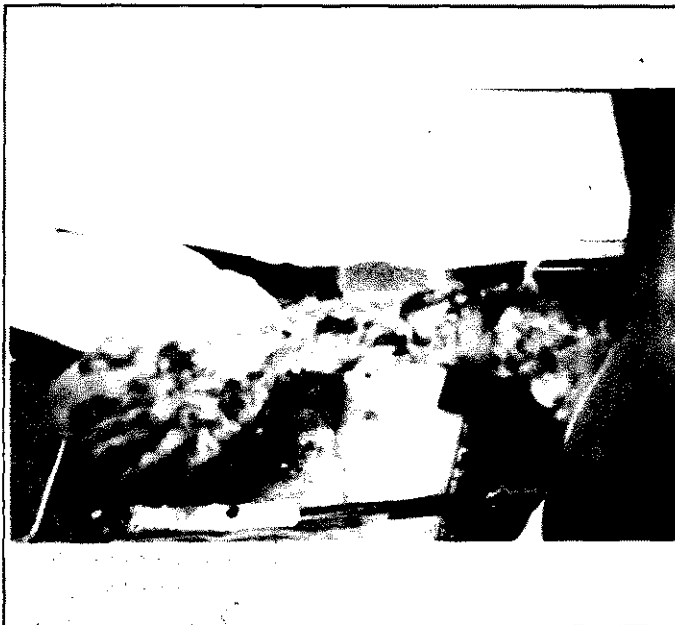


Fig-1: Trauma to forearm resulting in extensive soft tissue loss and precarious circulation with eminent gangrene of finger tips.

Greater omentum was mobilised through a minilap. Right gastroepiploic vessels were ligated to give extra length and mobility to the omentum. Circulation to the omentum was maintained by the left gastro-epiploic arch. Omentum was wrapped around the forearm and dorsum of the hand and was stitched in place. Partial thickness skin grafts were immediately applied over the omentum. There was successful take of the skin grafts; after 6 days there was no raw area left and progress of gangrene stopped. The pedicle was divided after 3 weeks and the defect repaired under local anesthesia.(Fig-2).

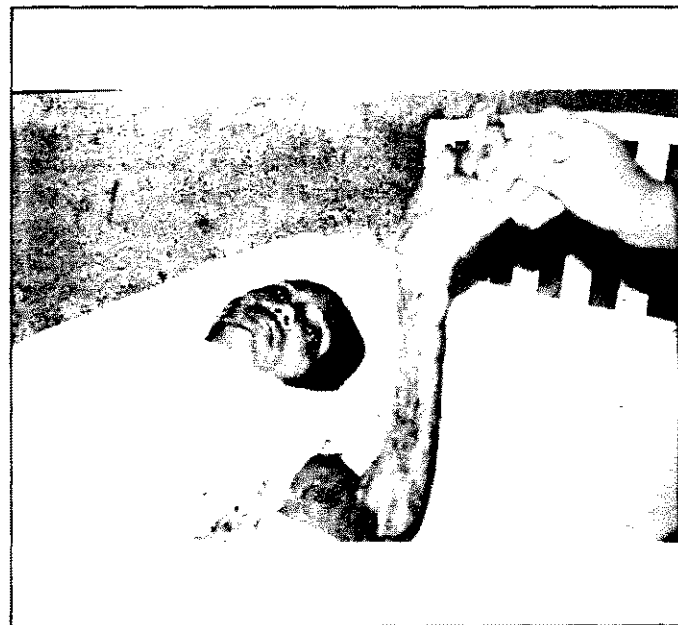


Fig-2: Same patient after omentoplasty (3 weeks)

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DISCUSSION

Greater omentum is known to be of great help in local defence mechanism of the abdominal viscera. It is frequently seen wrapped around an inflamed appendix, sealing a perforation, walling off an abscess cavity and covering ischaemic and gangrenous intestine. It has a double blood supply and is rich in vascular lymphatic network¹. It has lot of fat for padding tissue defects. It also has special immunological properties. It is very resistant to infection. It weighs 300 gm to 2000 gm and its surface area is 300-1500sq. cm. It can be easily exteriorised through a minilap without extra morbidity. Mobilization of comparatively large skin flaps is difficult, requires prolonged surgery and anaesthesia and leaves behind large scars. Omentum has the advantage of rich vascularisation and the quality of adhering to other tissues which can subsequently be rapidly vascularized. In this patient, extensive raw area with bones and tendons exposed, was provided full coverage through a minilap and practically no blood loss.

It is because of these qualities that greater omentum is being frequently used in plastic surgery. Goldsmith et al (1973) reported a successful use of omentum in reconstructive procedure of oesophageal fistula². It has been used for filling cavities of pancreatic cysts and hepatic hydatid cysts. It is also being used in severe burns of hands, radionecrosis, mammoplasty, trauma, thumb reconstruction and for covering a total hand prosthesis³. It has been used for reconstruction of chest wall defects⁴. Turner-Warwick et al have reported use of omentum pedi-

cle graft in the repair and reconstruction of the urinary tract⁵.

The advantage of using omentum in hand and forearm is that a large quantity of fatty connective tissue with very good blood supply and impressive potential for limiting scarring can be reliably transferred onto a badly traumatized hand and forearm which is covered with partial thickness skin grafts. Nerves and tendons can also be replaced during the same procedure and they remain protected by the skin grafted omentum. We recommend its use for coverage in extensive skin loss of forearm and hands where large full thickness skin flaps are needed. This is a safe and rapid procedure with a high success rate, minimum morbidity and no mortality.

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CHOLELITHIASIS IN A CHILD:

A CASE REPORT

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ABSTRACT

A seven year old male child presented with pain in upper abdomen on right side. On investigations multiple gall stones were found. Open cholecystectomy was carried out. Post operative course was uneventful. Cholelithiasis should be considered in differential diagnosis of abdominal pain in children.

KEY WORDS: Cholelithiasis, Cholecystectomy.

INTRODUCTION

Abdominal pain in children due to gall bladder disease is a rare occurrence and is most of the time not suspected¹. Each year number of case reports appear in literature and it is on increase². In this report we present our experience of one such condition.

CASE REPORT

A male child, aged 7 years, was admitted to Surgical Unit-I of Chandka Medical College & Teaching Hospital, Larkana with upper abdominal pain on right side. Past history of jaundice at the age of five years that remained obvious for one week was present. No evaluation was done as to its cause. He belonged to poor socio-economic class. Anaemia and jaundice were not present. Systemic examination, including abdominal examination, was normal. Laboratory investigations reported haemoglobin as 10.5g%, ESR 10 mm in first hour; TLC 8000/cu mm; neutrophils 56%, lymphocytes 40% and monocytes 4%. Urine examination was in normal limits. Liver function tests showed total serum bilirubin 0.6mg%, SGPT 15 U/L, Alkaline phosphatase 60 U/L. Erythrocyte morphology revealed mild hypochromic and normocytic picture and platelet count was 2,60,000/cu mm. Serum electrolytes were within normal limits. Serum cholesterol was 184 mg% and serum triglycerides 192 mg%.

Ultrasonography showed multiple echogenic foci with posterior acoustic shadowing present within gall bladder, suggesting gall stones. Gall bladder wall was thick. Liver, Spleen and kidneys were normal. Plain X-rays of abdomen and chest were within normal limits. Oral cholecystography failed to visualize gall bladder.

Further investigations were carried out to rule out

hemolytic disease. Reticulocyte count was 1.5%, sickling test was negative and malarial parasites were not seen in peripheral blood film.

Open cholecystectomy was done. The gall bladder was thick walled and contained 3 stones, each of about 2 cms diameter. The histopathological report of gall bladder confirmed chronic inflammation. Chemical analysis of stones revealed that they contained cholesterol.

DISCUSSION

Cholelithiasis is predominantly a disease of adult females and white coloured people. Nevertheless, it can occur at any age, in any colour and in any sex. In children, haemolytic anaemia has been reported to be the cause where the stones found are mostly of pigment variety³. In addition, cholelithiasis and cholecystitis may be associated with systemic disease like parasitic disease and chronic gastrointestinal and anatomic defects of gall bladder⁴⁻⁶.

Al-Salam-Ah et al have reported 150 cases of cholelithiasis with sickle cell anaemia. The youngest patient in this series was 7 years old. The case reported by us was also 7 years old but he did not have haemolytic anaemia⁷.

Kim-PC et al have compared laparoscopic cholecystectomy with open cholecystectomy. They conclude that Laparoscopic Cholecystectomy was the treatment of choice for symptomatic cholelithiasis in children⁸. The patient under discussion was a symptomatic case of cholelithiasis and was operated by open method because as yet we do not have facilities for Laparoscopic surgery at our institute.

Gabardella-B et al have reported a case of gall stones in

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a child with no apparent predisposing condition⁹. They have stressed the importance of considering cholelithiasis in children with abdominal pain as well as the value of ultrasonography in diagnosis and we fully agree with them.

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A TUBERCULOUS LYMPHADENOPATHY COMPRESSING DESCENDING THORACIC AORTA; IN ASSOCIATION WITH TAKAYASU'S DISEASE.

A Case Report

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S. IFTIKHAR, ALI

INTRODUCTION

Tuberculosis is a disease of great antiquity. What were almost certainly tuberculous lesions have been found in the vertebrae of neolithic man in Europe and in Egyptian mummies perhaps as early as 3700 BC.

Robert Koch first described the reinfection phenomenon tuberculosis in 1890; bears his name. Tuberculosis with lymphnode involvement shows a slowly progressive, well localized caseating granulomatous lesion. The organism was and still is obligate, acid-fast, alcohol-fast, aerobic or microphilic, non-sporeing and non-motile bacillus "Mycobacterium Tuberculosis".

Takayasu's disease is an arteritis of unknown etiology². Takayasu's an ophthalmologist in Japan in 1908 proved some inflammatory changes in the wall of vessels. ADAMS also reported the case of inflammatory changes of wall of vessel and its association with heart at Dublin Hospital in 1827¹. It is primarily a disease of oriental females with a sex ratio F/M of 8:1. Between the age of 10-24 years; but as early as 7 months and as late as 75 years. It has been known as over two dozens eponyms, the most frequently used Takayasu's Arteritis, Pulseless disease, Reversed coarctation & Idiopathic arteritis, etc. It has been linked to rheumatoid arthritis³, and other collagen disorders, rheumatic fever and streptococcal infections.

We report a case of a young female, who presented with Tuberculous Lymphadenopathy compressing descending thoracic aorta in association with Takayasu's disease.

CASE SUMMARY

A 16 years old, resident of Karachi was admitted with complaints of : Abdominal pain for two and half years, Fever for one and half year and Generalized Weakness

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for one year. Abdominal pain was generalized, continuous and non-radiating associated with vomiting relieved by medication with no aggravating factor. Fever was continuous and low grade accompanied by chills and nightsweats, relieved by medication and associated with generalized weakness.

She looked pale and had a puffiness on face on examination, there was Radio-femoral delay but no Radio-radial delay. Pulses of lower limbs were not palpable. She was febrile (99.6F); Hypertensive (150/100 mm of Hg) and Anaemic (Hb 6.8 gm%). Right axillary and anterior cervical chains of lymphnodes were palpable. Lymphnodes were firm, matted, mobile and nontender. Splenomegaly was also present. Apex beat was in 5th intercostal space shifted slightly lateral to mid-clavicular line. Pansystolic grade-II murmur was present all over the precordium (haemic type). Ejection systolic murmur was heard at inter-scapular region at the level of D5 to D8. There was also an ejection systolic murmur at the Epigastric region which accentuated on exertion. Thus diagnosis of Tuberculous lymph adenopathy compressing the thoracic aorta was made on clinical grounds.

Hb 6.8 g/dl; WBC 3.8, ESR 55mm in 1st hour; urea, electrolyte, creatinine, and LFT's were in normal limits. Montoux Test was positive, diameter was 12mm. Polymerase chain reaction for DNA of tuberculous bacilli was positive. Chest X-RAY; (Fig-1) revealed widening of mediastinum due to enlarged lymphnodes with no rib notching, or prominent bronchovascular marking. Left supra clavicular lymph node biopsy showed chronic granulomatous inflammation consistent with tuberculosis. Ultrasound abdomen showed splenomegaly, with small amount of free fluid in the peritoneal cavity. Lymphnodes at periaortic area measuring 1 x 0.8 cm in diameter compressing the aorta. Lymphnodes at porta hepatis were also enlarged. ECG within normal limits. Antibodies Screening included LE cells, antinuclear factors, and rheumatoid factors immunoglobulins were negative.

Echocardiography revealed normal valvular function including mitral and aortic valves. Left ventricular function was within normal limits. Color Doppler Flow showed decreased flow in descending thoracic aorta from D5 to D8. MRI Angiography (Fig-II) showed mediastinal lymph adenopathy with enlarged nodes in right paratracheal, carinal and subcarinal regions. There was evidence of enlarged lymph nodes in the right axillary region. Lymph node masses were present in subcarinal region and inferior hilar regions on left side, causing narrowing of the Descending Thoracic Aorta. There is evidence of diffuse narrowing of descending thoracic aorta which extended for a length of 9cm from D5 to D8. (Fig- III, IV, V) Lumen

FIGURE 1 Chest X-ray showing widening of Mediastinum due to lymphadenopathy

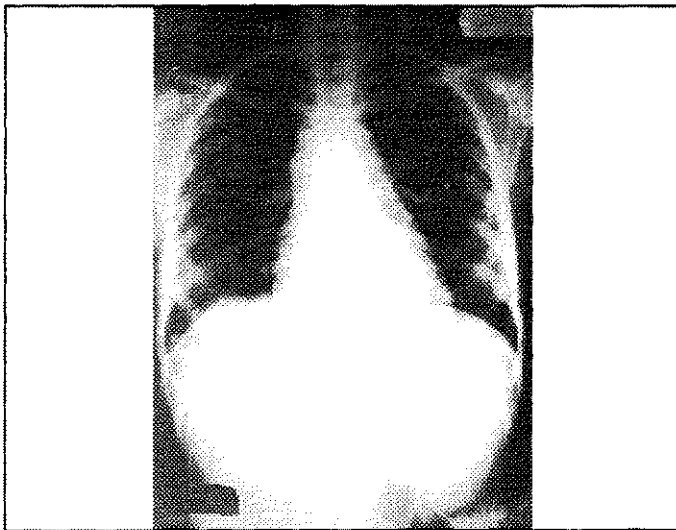


FIGURE 2 Anterior View of MRI Showing narrowing of descending thoracic aorta

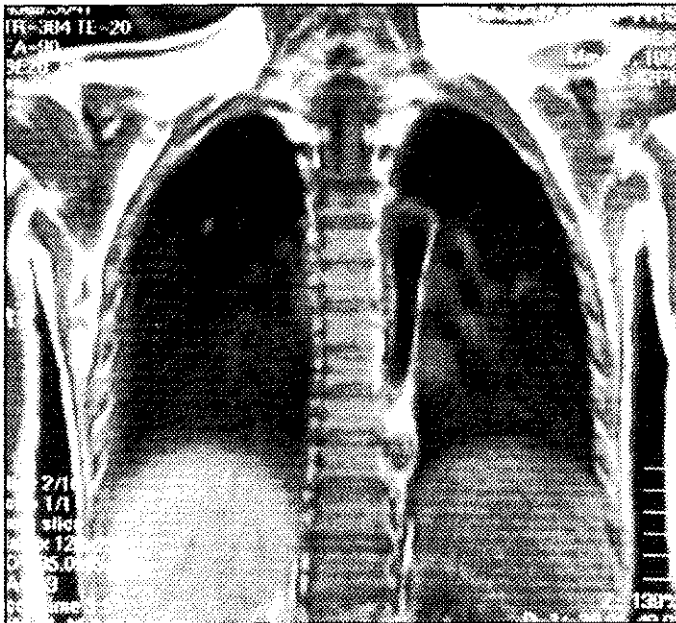


FIGURE 3 Showing narrowing of the lumen of descending thoracic aorta

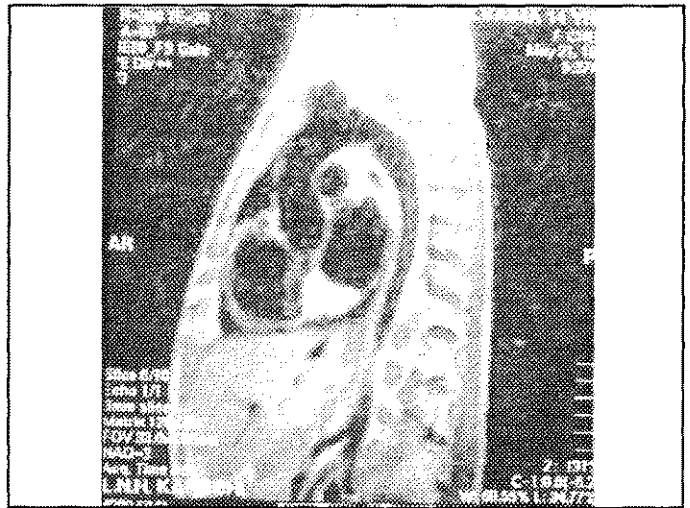


FIGURE 4 Lateral View of Heart, blood vessels and descending thoracic aorta

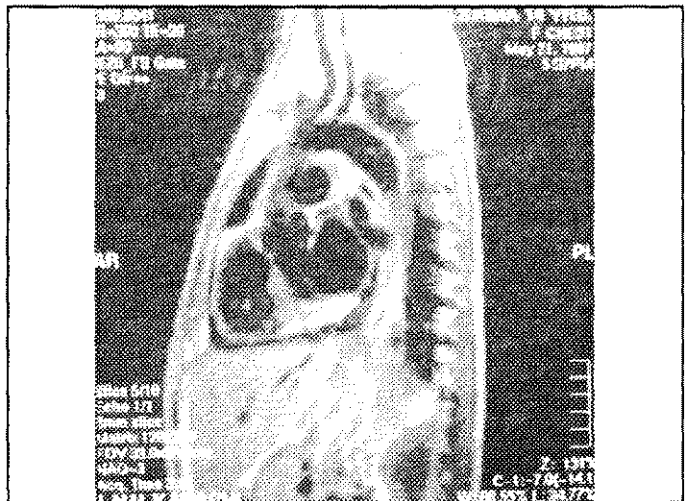
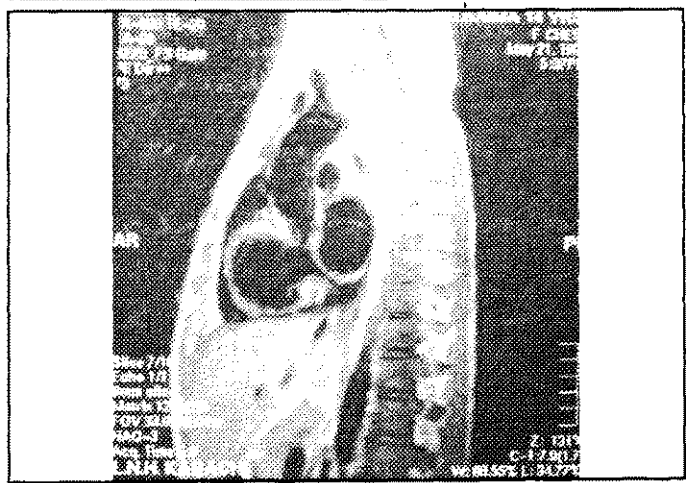


FIGURE 5 Descending thoracic aorta showing narrowing



of the narrowed segment measured 8mm; this was probably due to Takayasu's arteritis.

DISCUSSION:

The case we are reporting has tuberculus lymphadenopathy compressing the throacic aorta in association with takayasu's disease.

It is suggested that mycobacterium tuberculosis is not a direct causative organism of Takayasu's disease, but perhaps triggers the disease in genetically susceptible individuals by yet an unclear autoimmune mechanism⁸. Other antigens have also been postulated including viruses, streptococci, autoantigen of SLE and rheumatoid arthritis, and other collagen disorders^{4,6}.

Takayasu's disease is panarteritis; in the early stage there is a granulomatous inflammation, superficially resembling tuberculus granulomas, of arterial wall which may be patchy in distribution. The late stage is characterized by granulomas becoming fibrotic. The narrowing of the involved segment is produced by contraction of the markedly fibrosed adventia and media. There is a marked thickening of intima with subsequent thromobosis and occlusion. Numeno et al. have sub divided the disease and it's extent of involvement into three types⁹.

Involvement of aortic arch and it's branches only. Lesion localized to the throacic descending aorta and renal arteries. Lesion involving both supraaortic trunks, abdominal aorta and pulmonary artery. Lupi-Herrera and colleagues, cited by Fraga et al, have suggested a fourth category in which there is pulmonary arterial involvement⁹.

The etiology of Takayasu's Disease is unclear. Current consensus favours an autoimmune mechanism with a genetic predisposition⁵. Antiaortic antibodies have been isolated in some patients but it is not clear whether these

represent the cause or the effect⁴. Circulating immune complexes have been isolated, but there is no evidence of there causative role⁶. Genetic predisposition has been found in many cases and there are some reports of its association with HLA-BW52⁹⁻¹⁰. A link between tuberculosis and takayasu's disease has been suggested by several workers⁷.

CONCLUSION:

In our case there is a combination of tuberculosis and Takayasu's disease. We are treating the patient with anti-tuberculous and other supportive medicines. It will be interesting to see the effect of this treatment on the Takayasu disease in this patient.

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