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EDITOR'S NOTE

ORIGINAL ARTICLES

REVIEW ARTICLE

CASE REPORTS

EDITORIAL : MEDICAL RESEARCH AND STATISTICS

With modern computer programming everything is being converted, compressed and expressed in numericals and digits. Medical research is no exception. Superimposed on this is the statistical analysis of the available data using complicated formulae, values, standard derivations, co-efficients and indices etc. But all this is essential for understanding and confirming probability of research work done by surgical personnel.

Good scientific research is considered incomplete if it is not computed and analysed statistically. But somtimes the conclusions appear difficult to understand as they are couched in the strange language of statistics, specially for surgeons who have very little knowledge of this subject.

I am not against statistics and no research by any means is valid without it. But to become an expert in statistics to read and understand medical research articles, to comprehend and draw conclusions essential for a surgeon, who does not have time to study and understand complicated statistics is a difficult task. Of course, for exchange of medical research, knowledge by researchers may have as much statistics as they wish. Therefore but an article for working surgeons/doctors should have simple statics.

It is suggested that complicated statistics, that are being used or are necessary for an article, should have a separate section, written in such a way that a person who wants to skip statistics may skip that section without feeling guilty. It is also suggested that all major institutions where research is being done should have a properly qualified statistician who is always willing to make and work-up the statistics in such a way that readers who are less familiar with statistics should be able to understand the analyses done properly and clearly.

ASADULLAH KHAN

LETTER TO EDITOR

Dear Sir,
I would like to thank you for sending me the 2nd issue of the journal which defineitely could overcome the problems of the first issue. I am sure you have taken lot of trouble to do such a great job.
I am sending here an article for the Journal, theme of which was presented as a free paper at Istanbul Joint Congress of ELSA and EAES last month. Review of Dr. Udwadia was a good idea and was well written.
Thank you again and wish you good health.

Your sincerely

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Editor's Note
(Dr. H. Kabir Chowdhury's article was published in JSP Vol 2 No.3 ,July -September, 1997)

OUTCOME OF LAPAROSCOPIC SURGERY FOR FALLOPIAN TUBE BLOCKAGE IN INFERTILE WOMEN

SAQIB SIDDIQ, RASHID LATIF KHAN AND FARRUKH ZAMAN

ABSTRACT:
Thirtyseven cases of fallopian tubes blockage were treated in Infertility Advisory Centre Lahore during the two years period, April 94 to March 1996 by laparoscopic tubal surgery to improve the fertility status of women. In 9 cases we could not open the fallopian tubes. Tubal patency could be restored only on one side in ten cases. In 18 cases both fallopian tubes were opened. During followup, five patients achieved clinical pregnancy. Pregnancy rate was 13.5%.

KEY WORDS: Infertility, Fallopian tube blockage, laparoscopic surgery.

INTRODUCTION

Childlessness in a married woman is a tragedy and can cause marital upset. Bearing of children cements a marriage whenever a breakdown of partnership is threatened.

The birth of Louise Brown, following In Vitro Fertilization (IVF) in 1978, heralded a new era in the management of infertile couples[1]. The idea of IVF is very old. When the fallopian tubes were severely damaged and patency could not be restored, the idea of IVF was conceived.

In case of tubal closure, surgical correction can achieve patency in majority of cases. However, the post-operative tube is no guarantee that pregnancy will ensure. Prior involvement of the endosalpinx or its distortion by surgery itself may disturb the reproductive physiology to such an extent that pregnancy will never occur. That is why Alan Grant's advise should be kept in mind: "Tubal plastic surgery for infertility is followed by extensive and complicated adhesions. There should be minimal surgical trauma and least number of stitches". Assisted reproduction however is by no means a panacea. At best each treatment cycle may bring success to one fourth of our patients (ILA date). Moreover cost of IVF treatment is substantially high. Thus failure and its implications, psychological, emotional and physical must not be forgotten specially for couples belonging to poor socio - economic class. It is suggested that reconstruction with minimal invasive surgery, that means laparoscopy, may be tried specially in those cases where only salpingolysis or salpingostomy is required.

The present study was designed to evaluate the outcome of Laparoscopic tubal surgery in terms of canalisation of the fallopian tubes and conception rate. To - date no study has been published from local centres, because very few clinics are doing this procedure.

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MATERIAL AND METHODS

Cases of tubal diseases, which were previously diagnosed during laparoscopy as cases of peritubal adhesions and hydrosalpinx, were included in the study. Laparoscopic tuboplasty was performed in 37 women between April 1994 to March 1996 in the Infertility Advisory Centre, Lahore. Patients having abnormal sperm parameters of the husband, have been excluded from this study. Seventeen patients (46%) were below the age of 32 years and twenty patients (54%) were 32 years or above. Fifteen patients (41%) were suffering from primary infertility and twenty patients (59%) were of secondary infertility. Patients having blockage were given option for laparoscopic tubal surgery or I.V.F. Those opting for surgery underwent this procedure.

PROCEDURE

Patients are given general anaesthesia and placed in lithotomy position. Routine preparations for laparoscopy is carried out. The equipment required is Wolf laparoscope, Halogen light (250 watts), colour video camera and colour T. V. Monitor (Medical grade) with zoom. Irrigation and suction facilities are also required.

Adhesiolysis

This procedure is carried out with the help of scissors and diathering when there are omental adhesions in the pelvis or adherent fallopian tubes with the surrounding structures. Bleeding points are identified and homeostasis secured by coagulation diathermy, by touching the area with a special probe.

Salpingostiomy

The hydrosalpinx and fimbrial end blockage is confirmed. The tip of the fallopian tube is held in the graspe. Then 's' fine probe, which is attached with diathermy, is introduced at the blocked site of the fimbrial end and the patency is restored. Sometimes the extension of hole is carried out with the help of scissors. If the hole cannot be made with the probe then the tip of scissors is inserted into the firmbrial end and both the blades are opened. Pelvic is then irrigated with normal saline and blood is sucked out. After the completion of tubal surgery methylene blue dye is injected into the cervical canal and spillage of dye is seen through the fimbrial end. CO_2 is removed and number one catgut stich is applied to all the three incisons. In our patients no post-operative antibiotic was used. Patients were kept in the hospital for at least 24 hours. Post operative hydrotubation as suggested by some authors[2] was not used. After the procedure we encouraged the patient to become pregnant within 9 months. Ovarian stimulation was carried out in the last five months.

As suggested by Umezaki et al[3] and confirmed by Russel et al[4], salpingostomy treated tubes require longer healing time so the results could improve with longer followup. But in our society longer followup is not possible because people do not cooperate or they go for IVF.

RESULTS

Total number of patients included in this project were 37. Out of these in 21 cases we performed adhesiolysis and in 16 cases salpingostomy was performed. In 9 cases fallopian tubes could not be opened. Tubal patency could be restored only on one side in 10 cases. In 18 cases both tubes were opened. After the procedure, 5 patients became pregnant within 9 months (19%). The overall pregnancy rate per total number of cases included in the study is 13.5 per cent.

Outline of Treatment

Total cases	37
Normal Intrauterine pregnancy	5 (13%)
Ectopic pregnancy	Nil

DISCUSSION

In our study only 5 patients (13.5%) achieved clinical pregnancy which is quite low as compared to the results from the Western countries. In reported series the overall pregnancy rate, after salpingolysis varies from 40-60% and after salpingostomy from 10-40%[3-5]. In our series the restoration of the tubal patency is only 48%. In international series it varies between 50 to 90%.

The main reason is the presence of chronic P.I.D and genital tract tuberculosis in this part of the world. It is difficult to compare the results of infertility surgery because of the variability of pelvic pathology. Are pelvic adhesions present? If so to what degree and in what areas ? With distal tubal diseases, What degree of tubal abnormality exists? Are the tubes dilated and if so to what extent? Are intraluminal adhesions present? Do fimbrial remnants remain? What is the condition of the endosalpinx? Even in the available retrospective studies, many of these questions are unanswered.

The incidence of infertility as quoted by many authors is 10-15% of all unions[1]. Partial or complete bilateral tubal obstruction accounts for upto 20% of all cases of infertility[6]. With indigent populations, tubal diseases are more prevalent. Diagnostic techniques for cvaluating tubal function and pelvis in general, have become more sophisticated. However they still indicate only patency, obstruction or distortion but not the degree of physiological impairment. Reproductive function remains unmeasured even after correction of the tubal factor.

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BRONCHOSCOPY FOR FOREIGN BODIES IN CHILDREN

M.YOUNIS KHATRI, NAJMA SAYEED

ABSTRACT:
Bronchoscopies were performed in children for foreign body aspiration, repeated chest infections and wheezing. 306 bronchoscopies were performed from January 1994 to September 1997 (45 months) at National Institute of Child Health (NICH), Karachi. In 271 cases foreign bodies were found in the airway, whereas in 35 cases no foreign body was visualised. The most common age group for foreign body aspiration was 1-3 years with male dominance. The most common foreign body was betel nut. All bronchoscopies were done under general anaesthesia, induced with inhalational agent Halothane; when the required depth of anaesthesia was achieved airway was sprayed with Xylocaine 2%. Breathing circuit was attached to the side arm of storz bronchoscope, and was kept on spontaneous/assisted ventilation. Injection Dexamethasone intravenous was given to all during bronchoscopy. Injection Atropine was given in all cases as premedication except in 15 cases who had tachycardia (Pulse rate 120-150/m). Post bronchoscopy stridor and wheezing were common, so every patient was given humidified air/oxygen for more than 6 hours. Fifteen patients died. Foreign body in airway is preventable by mass education and legislation on sale of betal nuts (sonf supari) and small whistles. Nuts and other small items should be kept out of reach of children.

KEY WORDS: Bronchoscopy, Foreign Bodies, Children

HISTORICAL BACKGROUND

In order to examine body cavities, Bozzini invented in 1807 a cylindrical metal tube illuminated by candle-light. In 1985 Gustav Killian used a laryngoscope to peer below the cords. The technique of modern bronchoscopy was developed by Chevalier Jackson in the USA and by Victor Negus in the UK in the early years of this century. Foreign body aspiration and their mortality and morbidity was very high. Jackson reported in 1936 that the mortality from foreign bodies had decreased from 20% to 2% by the safe use of bronchoscope. Hypoxia was the major problem for which Draper and Whitehead described diffusion respiration in 1944, and Drager advocated in 1947 Apnoeic oxygenation. Later on Ikeda introduced Fibroptic bronchoscope in 1968, which was not ideal for foreign body removal. In 1976 Hopkins invented ventilating bronchoscope and provided illumination with rod lens system, which solved the problem of anaesthesia as well as extraction of foreign bodies.

INTRODUCTION

Foreign body aspiration is a common problem in children and results in high morbidity and mortality. A case history of choking with dominating symptoms of cough and wheezing helps in the diagnosis of foreign body airway. Bronchoscopy in children demands high skill and monitoring, because small airway is shared by the anaesthetist as the well as endoscopist. The safe use of bronchoscope with skilled monitoring has decreased the death rate from 20% to 2% to negligible. Foreign body airways is however preventable.

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MATERIAL AND METHODS

During 45 months (Jan 1994 to Sept 1997), 306 bronchoscopies were done at NICH, Karachi. Paediatric rigid ventilating bronchoscope (Storz) with Hopkins rod lens system was used. In 35 cases, there was no foreign body, pus and thick mucus plaque were removed. In 267 cases foreign bodies were removed. Four patients left against medical advice after failure in removing foreign body in the first attempt. Three cases were anaesthetized thrice in order to remove the foreign body, 7 cases were anaesthetized twice and 2 cases needed thoracotomy.

There were 192 male and 114 female children. 54 children were under one year of age; 154 between 1-3 years of age and 98 children were more than 3 years old. Betel nut was removed in 137 (45%) cases, parts of whistles in 53 cases, peanuts and pieces of dry fruit in 48 cases and beads in 12 cases. Post-operative strider and wheezing was common, which was treated with humidified air/oxy-

gen and injection Dexamethasone for three days to reduce oedema. Antibiotic cover was given to every patient. The strider and wheezing took 6-24 hours to subside. Fifteen (5%) patients died, three during the procedure, five immediately after or within one hour after bronchoscopy. Four died within 24 hours and 3 died 24 hours after bronchoscopy.

FOREIGN BODIES n=306

Betel nut	137	45%
Whistle (part)	53	17%
Peanut and other organic substance	48	16%
Beads	12	4%
Miscellaneous	17	6%
Unknown	04	1%
No F.B.	35	11%

DISCUSSION

Foreign body inhalation is common in Karachi; due to excessive sale by vendors of sweetened and coloured betel nuts in attractive packing for children and use of pan.There is general unawareness of the complications of foreign body inhalation. In Wagoya city hospital, Japan, only 64 cases have been reported as foreign body aspiration in 18 years[1], whereas in Karachi 306 cases presented in less than 4 years at one hospital. Wolach and others have reported 127 cases in 11 years[2]. Black RE et al have reported 262 bronchoscopies in children for foreign bodies in 13 years[3].

Bronchoscopy as a procedure is difficult and problematic in children. The anaesthetist needs to maintain and secure airway and endoscopist needs to visualize and obtain access to the foreign body. The problems of bronchoscopy are enhanced by the age of patient, type, size, shape and duration of the foreign body[4]. Rigid bronchoscope has a sheath and a telescope. Sheath of the bronchoscope may fit tightly and lead to mucosal oedema; high resistance impedes the gas flow which may require greater inspiratory pressure[5]. Air trapping can occur with barotrauma and haemodynamic compromise[6]. Low gas flow with more time for expiration solves the problem.

A child may report to the hospital in emergency with history of choking, cough and wheezing. Proper equipment, skilled endoscopist and expert anaesthetist are available in few centres only. If the child is lucky, he may get specialized and timely treatment, otherwise he may reach these centres few days to few weeks after inhaling foreign body[7]. The betel nut (Areca, catechu, Supari) usually scented and other organic food particles on inhalation start chemical reactions leading to chemical pneumonitis. Airway may be full of secretions and pus, foreign body may be stuck by oedema and spasm of airway; so more than one attempt is required to remove the foreign body in one piece or in small pieces due to its slippery and friable nature.

It is a worldwide fact that inhalation of foreign bodies is more common in age group 1-3 years[3,8]. Black RE has noted about 81%incidence of foreign body inhalation in age group 1-3 years, whereas in this study it is about 50.32%, and in another study by Khan IA[9] 50%.

Inhalation of foreign body is more common in males, 62.74% in this study and 67% in the study of Yamamotos S[1]. Betel nut is the most common foreign body removed by bronchoscopy (45%) in all studies done in Pakistan; whereas peanut is common in other countries (62% in the study of Yamamotos S)[1]. Whistles are available free with or in packets of chips. It whistles on taking deep breath and the loose part may dislodge and get aspirated easily.

Most paediatric patients presenting for bronchoscopy have some degree of airway compromise. Chemical reaction of organic foreign bodies, infection and long duration in airway make foreign bodies friable and may require multiple attempts to remove these piecemeal[10]. Small airway with chemical reaction due to foreign body and manipulation of airway by bronchoscope add up and give rise to oedema to the airway and strider on removal of bronchoscope.

Mortality of bronchoscopy for foreign bodies is high, about 5% in this series. The reason is late diagnosis, improper treatment and late arrival of patient at the specialized centre. Becker[1] and Baraka[11] have reported nearly no mortality, but had complications like bradycardia, stridor and tension pneumothorax. In our series all were pre-medicated with Atropine and Corticosteroids; authors have noticed stridor in most cases, which was controlled by humidified air/oxygen and Cortisone. Corticosteroids were continued for 3 days with humidified air/oxygen where stridor and breathing difficulty was observed. No case developed tension pneumothorax in this series. Nitrous oxide was not used.

CONCLUSION

There are few anaesthetic goals that are shared independent of the technique used. The most important is preservation of adequate oxygenation and ventilation. Care must be taken during suctioning which may promote atelectasis. Foreign bodies must be removed before resolution of pneumonia. When there is history of choking, cough and stridor always think for foreign body aspiration and bronchoscopy should be done before airway gets worse. In few cases proper history of choking may not be available. On examination unilateral bronchiospasm with repeated respiratory tract infection may be dealt on the

lines of foreign body aspiration.

Foreign body aspiration is a preventable condition, it needs mass education of parents and wards of children. The use of betel nut must be discouraged. Small objects should be kept out of the reach of children

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HADFIELD INTENSIVE CLINICAL SURGERY COURSE

The Hadfield Clinical Surgery Course was organized by CPSP from 8-16 October 1997. The course was held at Baqai Hospital, Sindh Institute of Urology and Transplantation, Jinnah Postgraduate Medical Centre, Civil Hospital Karachi and National Institute of Child Health in which beside Prof. John Hadfield, Prof. F.U. Baqai, Prof. Adeeb Rizvi, Prof. Irshad Waheed, Prof. Azhar Hussain, Dr. Mehboob, Prof. Fahim, Prof. Abdul Aziz and Dr. Asadullah Khan also delivered lectures to the participants. Such courses were also held at other major cities of the country.

The courses was attended by a large number of Postgraduate students.

THE PSYCHOLOGICAL ASPECT OF CLEFT LIP AND PALATE (Assessment of behavior in daily life)

NASIR ZAMAN KHAN, FAIZ MUHAMMAD KHAN, MANZOOR HUSSAIN, INAMULLAH MEMON

ABSTRACT:
A study of 110 cleft lip and palate patients (CLP) was carried out in the Department of Plastic And Reconstructive Surgery, JPMC, between March 1990 and March 1997. The patients were analysed in every day life activities before and after surgery. The literature scanned was found to be mostly from the point of view of neurologists and psychiatrists with complicated psychiatric statistical tests and analysis, while this study deals with observations made in the every day life of CLP patients. The patients were divided into four age groups. Data such as Confidence in speaking (Graded 1-5) number of friends, social activity most of the time, such as TV viewing, spending time with friends, spending time alone and other activities. Social acceptance (Graded 1-5) Marital status and level of education (College School etc.) were collected before and after surgery. In addition observations such as confidence in speaking, asking questions, social activity with others, appearance and grooming, awareness of the patient to the problem, self consciousness, expectations from the treatment, and social acceptance (graded). Significant observations were made from the above data and are presented in a simple comprehensible manner for surgeons to apply in clinical practice.

KEY WORDS: Cleft, Lip, Palate, Psychology

INTRODUCTION

Over generalization in conflicting data in literature is to be avoided, and caution exercised in approach to patients with Cleft Lip and Palate who require treatment[1]. Psychoneuroendocrinological studies confirm that patients with CLP are at a higher risk for adjustment problems because of earlier developmental events, and this in turn may affect language, behavior, and self esteem[2]. Development of personal identity, peer relationships and individuation from family become extremely difficult for the patient with CLP, as this is in addition to the treatment demands and psychological stress the CLP patient is already undergoing[3]. Externally visible defects were discovered to be a greater source of dissatisfaction among patients with CLP, but problem solving abilities were higher in these patients than those with invisible defects. Both groups showed less social independence, however the number of friends were more in CLP patients than the normal[4]. According to Strauss & Broder, a definite sub-population exists among cleft patients that suffer from mental retardation[5]. After ensuring that a group of sixteen children with cleft lip and palate were not suffering with congenital neurodevelopmental dysfunction, it was discovered that children with CLP had a lower mental development index (MDI) and a lower psychomotor development index than a control. They also had lower language comprehension and low expressive language scores[6]. A significant risk also exists among patients of CLP for social competence problems, like development of friendships, progress in school, and participation in organizations. The above mentioned problems are actually important milestones in psychological development. Facial aesthetics are well known to effect peer acceptance. Psychological developmental stages are very important for social workers, family and teachers to integrate their attention according to the rapidly changing world of these patients[7,8]. Anxiety, depression, and palpitations were reported twice as common in cleft lip and palate patients as compared to controls. These psychological problems were strongly linked to a concern among these patients for their dentition, appearance, speech and desire for further treatment[9]

In a study in Norwegian adults, there was little difference in educational attainment and employment, however patients with CLP married later in life than the control population and their income was lower than the control[10]. A study of 23 mothers and their children of 5 to 7 years, with craniofacial anomalies was carried out and it was found that in 18% a clinically significant behavioral problem existed[11]

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Bennet and Stanton have studied the available literature and concisely tried to develop a treatment strategy for patients with craniofacial anomalies[12].

With the lack of literature on the subject and most studies among these, it was discovered, were clinically and technically oriented, need was felt to produce a study based on every-day life activities, so that a combined assessment of every-day life and Psychological testing may shed further light on this intricate topic.

In Pakistan, the psychosocial background differs; there is extreme lack of education and consequent lack of awareness. The school-going age is around 2.5 years, peer pressure in school going age is the same everywhere, however it may be more in later ages than in the West due to lack of education.

PATIENTS AND METHODS

A prospective study, based on questionnaires, before and after surgery was planned. Patients were divided into four age groups:

- 2 .5 years to 10 years
- 11 years to 15 years
- 16 years to 30 years
- 30 years and above

Both sexes were included: Parents were questioned in addition in Age Group I.

Four Questionnaires were designed; Questionnaire I-A (Table I) and II-A (Table III) were designed for the patients' (or parent/guardians') point of view before and after Surgery.

Questionnaire I-B (Table II) and II-B (Table IV) for the researcher's point of view before and after surgery. Most of the time both Questionnaires were filled out by the researcher after questioning as most of the patients, parents and guardians were illiterate. Patients were recalled after 6 months and then on a yearly basis, data similar to Questionnaire II-B, was collected for follow-up every year.

The protocol followed for the time of repair of palate and lip is as follows:

- Palates around 6-9 months $\pm$ 2 months.
- Lips around 3 months $\pm$ 10 days.
- Facial Clefts around 3 months -2.5 years.

RESULTS

Break-Up of Cases

The total number of cases was 110, among which there were 65 unilateral Cleft Lips, 45 with associated Cleft Palates. There were 40 bilateral Cleft Lips, 38 with associated Cleft Palates. Among the facial clefts there were 5 Oblique facial Clefts, 4 with associated Cleft Palates.

Marital Status

All Single in age groups I-III, 5 patients married in Group IV, (3 females and 2 males). The average age=2.5 years ranging between 5-80 years.

DISCUSSION

Clefts of the face and lips at an early childhood have no effects on the psychological status. Because the school going age in Pakistan is 2.5 years, self-consciousness of the facial contours appear and consequent early peer pressure, therefore an earlier recognition of the problem may be the deciding factor in when to seek psychiatric counseling.

Clefts of the Palate however, have a significant effect on the confidence of the child, especially after the child learns to speak, since the child attempts to mimic the nor-

TABLE I — **QUESTIONNAIRE I-A: PRE-OPERATIVE BY THE PATIENTS (OR GUARDIAN)**

A.G	No.	F	M	Average Friends	Speaking confidence Graded 1-5	Social Activity				Education	
						TV	Friends	Alone	Misc	School	College
I	38	15	23	3	3	21	7	10	Nil	10F, 20M	Nil
II	45	30	15	2	2	18	12	10	5	10F, 15M	Nil
III	15	11	4	1	1	5	8	2	Nil	2F, 1M	1F
IV	12	9	3	2	3	6	2	4	Nil	2F, 2M	Nil

TABLE II — **QUESTIONNAIRE I-B: POST-OPERATIVE BY THE PATIENTS (OR GUARDIAN FOR GROUP I)**

A.G	No.	F	M	Average Friends	Speaking confidence Graded 1-5	Social Activity			
						TV	Friends	Alone	Misc
I	38	15	23	4	4	10	19	4	5
II	45	30	15	3	3	10	25	2	Nil
III	15	11	4	3	4	3	10	2	Nil
IV	12	9	3	2	3	5	6	1	Nil

Average social acceptance = 4

mal and cannot reproduce it. Peer pressure, if the child is accepted in school, is tremendous, and makes matters worse. Cleft palates, when left un-operated beyond this age, result in a quiet child and due to defective speech, the child refrains from speaking before strangers.

Clefts of the lips or face however have a different effect on the child, and there is a great decrease of confidence and esteem especially if defects of the palate co-exist, usually resulting in a loner and quiet child.

The psychological status in Group I and Group II seems to be less significant in the pre-op phase, but the changes in behavior are very sharp after the treatment is over i.e., immediately after. There is a peak in Group- III, and a significant change is visible in this age group and this age group responds to the treatment the best. Group IV shows little effect on behavior before and after the surgery, although a subtle difference is however present.

The above changes are consistent with the assessment of the researcher as given in Table III compared to Table IV. The researcher finds social acceptance to be one of the most important factors among all others in the life of a CLP patient. And a comparison of Table III and IV clearly shows a definite increase in social acceptance which is very gratifying for the clinician. Table V however shows a comparison between two points in time and only emphasizes gradual but definite social and other adjustment of these patients.

A late follow-up shows a significant change in all age groups and there seems to be sufficient social adjustment.

The long-term follow up was good at 4 years as only 16 out of 110 patients were lost. Poor at 7 years as 100 patients were lost, but the results in the patients that turned up, were extremely encouraging for the surgeon.

CONCLUSION

Cleft repairs are very encouraging at any age, and equal consideration should be given to all age groups (Tables I through V).

TABLE III QUESTIONNAIRE II-A: BY RESEARCHER PRE-OPERATIVE CONFIDENCE AND AWARENESS (GRADED 1-5)

Activity	Group I	Group II	Group III	Group IV
Speaking	2	2	3	3
Asking Questions	1	2	2	3
Social Interaction	2	1	3	2
Appearance and Grooming	4	3	2	3
Self Consciousness	4	4	5	4
Expectations of treatment	4	4	3	3
Social acceptance	2	2	2	3

TABLE IV QUESTIONNAIRE II-B: BY RESEARCHER POST-OPERATIVE AT 6 MONTHS CONFIDENCE AND AWARENESS (GRADED 1-5)

Activity	Group I	Group II	Group III	Group IV
Speaking	4	3	4	4
Asking Questions	3	4	4	3
Social Interaction	5	4	4	3
Appearance and Grooming	4	4	5	5
Self Consciousness	2	2	3	2
Expectations of treatment	4	4	4	5
Social acceptance	4	4	3	4

TABLE V FOLLOW-UP SIMILAR TO QUESTIONNAIRE II-B

Activity	4 years n=94	7 years n=10
Speaking	4	5
Asking questions	4	5
Social interaction	5	5
Appearance & grooming	5	5
Self consciousness	4	1
Satisfaction of treatment	1	4
Social acceptance	4	5

This study shows a significant change in psychology of all the age groups, but with sufficient guidance from social workers, and help from child psychologists, will definitely give optimum results, than surgery alone.

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INTERNATIONAL COMBINED SURGICAL MEETING 97

The International Combined Surgical Meeting 97 was held at College of Physicians & Surgeons Pakistan from November 7th to 9th, 1997. It was a joint meeting sponsored by International College of Surgeons (Pakistan Chapter), SAARC Association of Surgeons (Pakistan Chapter) and Society of Surgeons Pakistan. The theme of the Conference was **Healthcare Future in Under Developed World.** The Conference was attended by a large number of surgeons from all over Pakistan. Prof. Irshad Waheed wishes to thank all surgeons who participated in this Conference and made it a success.

CROSS LEG FLAP AN EFFECTIVE METHOD IN TREATING GRADE-IIIB OPEN FRACTURES OF TIBIA-FIBULA

ASADULLAH MAHAR, SAEED SAMO

ABSTRACT:
Road traffic accidents and high velocity missile injuries often result in open fractures of tibia and fibula with severe comminution and bone loss. Meticulous debridement and early stabilization of fractures with external fixator offer good results but injuries with more significant soft tissue damage, with exposed bony ends, if left without skin cover may lead to bone dessication, osteomylitis and amputation. Cross leg flap, as a method of soft tissue cover, was used in 24 cases of open fractures of tibia and Fibula (grade III B of Gustilo) during the four year period from July 1993 to January 1997, with 100% flap success rate and 16% fracture non-union, requiring additional surgery. We consider cross leg flap a simple reconstructive procedure which not only salvages the limb but also offers early healing of wounds and fractures. It provides stable cover for subsequent operative procedures like bone grafting and internal fixation.

KEY WORDS: Cross leg Flap, Fractures Tibia - Fibula

INTRODUCTION

Successful management of open fractures of lower extremity depends on meticulous debridement, stable external fixation and provision of viable soft tissue coverage. There are many available procedures of wound coverage, including split skin grafts, advancement of flaps, muscle flaps, local myocutaneous flaps, cross leg flaps and micro-vascular flaps[1].

Cross-leg flap was first introduced by Hamilton in 1854. It was frequently used during and after World War II for resurfacing of complex leg injuries. Among the disadvantages of this flap, Brown listed unreliability, prolonged immobilization and cosmetic disfigurement of un-injured donor extremity[2]. But, Hudson & Millar in their 5 years experience of reconstruction of distal part of leg and foot, consider cross-leg flap a safe and reliable alternative to free tissue transfer in lower limb trauma[3]. Skyes and Bryson[4] and Serafin et al[5] compared the free flaps with cross-leg flap for covering large defects and concluded that free flap is preferable to the latter because total immobilization period, hospital in-patients time, number of times for general anaesthesia and morbidity is less with free flaps.

Selecting the appropriate method of wound cover requires evaluation of extent of injury, patient's age, expertise of surgical team and the available facilities[6]. When deciding on a particular reconstructive procedure, one should also consider any functional disability incurred by such procedure[7] along with the economic considerations.

Meticulous wound care and skin grafting, as advocated by Witschi and Omer[8], is adequate treatment in fresh wounds with no loss of soft tissues, but skin grafts, when applied over poorly vascularized fat or bone without periosteum, will not survive.

Advancement flaps, although used for covering defects in upper extremity and torso, are often difficult to use in lower extremity, primarily because of the distance required for advancement of healthy, pliable tissue and poor vascularity of recipient bed. In badly traumatized leg, the tissue being used as source for flap may itself be injured[2]. Local rotation or transposed flaps have limited application in acute injuries.

Stark first discussed the use of local muscle flaps in 1946. R. Ger refined and popularized this method[9]. When available, muscle flaps provide a reliable bed for repaired bony injuries. Daniel & Taylor introduced the free flap[10] in 1973. Many authors have described the advantages of this new technique but micro-surgical reconstruction is a demanding procedure and may not be feasible in every setting, even if indicated. Further-more, severe infection at fracture site[11] and no suitable recipient vessel of injured leg (not uncommon in grade-IIIB open fractures), may limit the use of microvascular flaps. In general, the simplest

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method that meets the reconstructive goals should be chosen in cross-leg flap may still be resorted to in order to provide satisfactory full thickness cover a fractured tibia. In a situation where soft tissue defect over lower leg is too large for repair by local flaps and unsuitable for free flap because of vascular damage or lack of suitable facilities, a cross-leg flap may always be considered[12].

PATIENTS AND METHODS

Selection of patients was based on Gustilo's classification[13]. All patients having grade-IIIB open fractures of tibia-fibula as a result of road traffic accidents[5] or gun shot injuries treated in Orthopaedics unit of Chandka Medical College Hospital, Larkana during the period from July 1993 to January 1997, were included in this study.

TECHNIQUE

Initial emergency treatment consisted of tetanus prophylaxis, wound culture, saline wash, antiseptic dressing, splintage of fracture, analgesia and intravenous cephalosporins. Patients underwent surgery as soon as possible. Meticulous debridement and irrigation with copious saline followed by stabilization with A. O external fixator of fractures was done. Usually after 48 Hrs repeat debridement and medically based random fasciocutaneous cross-leg flap was carried out. The immobilization of both legs and flap was achieved by constructing two-pin assembly over the donor leg. Flap detachment and inset was done on or after 21 days of flap attachment unless contraindicated in an individual situation.

RESULTS

A total of 24 cases were treated in this manner. All except one were male. Average healing time of wound was 40 days. 3 (12.5%) cases developed superficial infection and healed spontaneously. 2 cases (8%) had deep infection with Osteomyelitis requiring surgical treatment.

Two other cases (8%) ended in nonunion and were treated with bone graft and internal fixation. Overall, flap success rate was 100% for skin and soft tissues, but healing of fractures was obtained in 84.5%. The healing time of fractures that healed primarily was 4-6 months (mean: 5.2 months).

Results of one such case are shown in photographs 1 to 3.

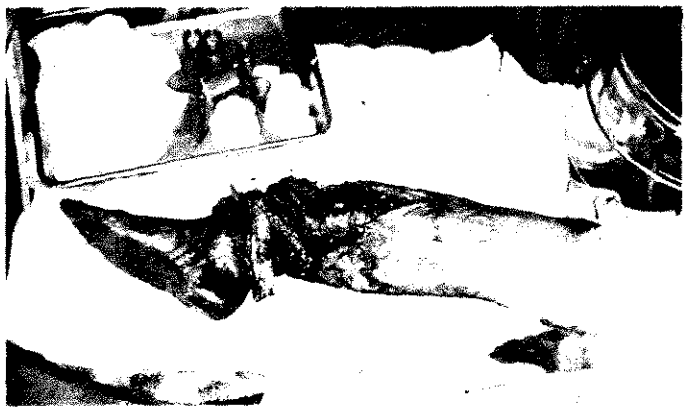

Fig. No. 1. Badly damaged leg in a road traffic accident of 60 years old man having grade III-b open fracture of Tibia fibula

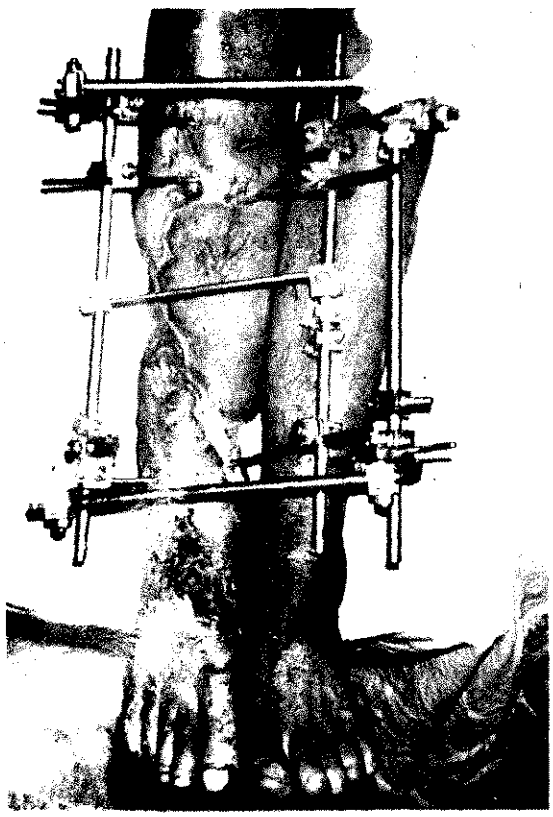

Fig. No. 2. Cross leg flap appliedd to cover exposed bony fragments and immobilization with external fixator

TABLE I COMPARISON OF SEVEN SERIES OF OPEN TIBIAL FRACTURES

Series	Grade (Gustilo) 1-2	3	No. of Bone Grafting	Fixation Time (Weeks)	Healing Time (Weeks)
Karlstrom & Olerud (17)	48	63	50	18	31
Lawyer & Lubbers (19)	16	10	06	15	26
Benum & Svenningsen (4)	26	12	11	24	34
Aho et al (2)	47	23	06	06	31
A. Nesbakken et al (1)	17	15	10	16	33
Saeed Samo	23	12	09	13	22
A. Mahar & S. Samo	—	24	04	09	22

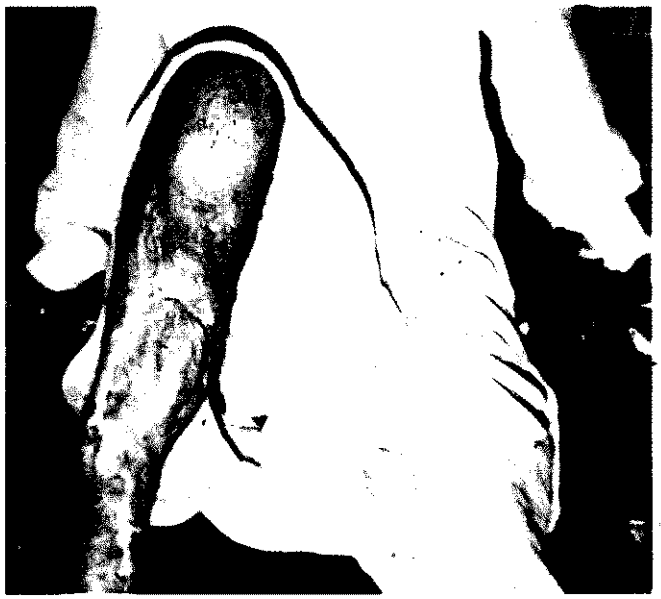

Fig. No. 3. Healed fracture under the cross leg flap at 6 months

DISCUSSION

We do not yet possess facilities for use of free flaps. However, we found the objections of opponents of cross leg flaps rather exaggerated[14]. Comparison of our series with other similar ones showed that immobilization done with external fixators was well tolerated and morbidity was a negligible element in our series. Healing of wound and fracture has been quicker as compared to other studies. (Table I) Hospitalization of patients in our study is almost equal to other series that is 40 days vs 38 days.

Long et al. (1993) concluded that by using external fixation technique cross-leg flap can be used successfully and expeditiously to cover the defect of lower extremities[15].

Although free flaps are considered an important option in the surgeon's armamentarium in reconstruction of lower extremity injuries, situations arise when alternate methods are needed[16]. Cross leg flap in our experience has been one of admirable alternative.

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OESOPHAGEAL FOREIGN BODIES AT RAWALPINDI GENERAL HOSPITAL (An experience of 175 cases)

MOHAMMAD ASLAM, M. SHOAIB SHAFI

ABSTRACT:
Impaction of foreign bodies in the oesophagus is a common emergency in children, though it may also occur in older people. Common presentations are absolute dyphagia, discomfort, excessive salivation and in few cases retro sternal pain radiating to the back. Diagnosis is usually made on history and may be confirmed on plain radiography. Removal of foreign body from the oesophagus by rigid oesophagoscopy under general anaesthesia is a safe and effective method. In this study we report 175 cases of oesophageal foreign bodies removed by rigid oesophagoscope. The common foreign bodies were coins (55%) and meat bolus (25%). 128 (73%) of the total patients were children between 2-7 years of age. Cricopharyngeus was the commonest site of impaction.

KEY WORDS: Foreign body, Oesophagus Endoscopy.

INTRODUCTION

Foreign body impaction in oesophagus occurs either because of the size or nature of ingested material or because of oesophageal narrowings which may be pathological. The established method of removal of oesophageal foreign bodies is rigid endoscopy under general anaesthesia. An experience with 175 cases of oesophageal foreign bodies is presented.

After nose and ears, oesophagus is the most common site for foreign body impaction. In gastroenterology esophageal foreign bodies are the most common presentation of acute dysphagia. Coins, bones, open safety pins and lumps of meat and dentures are frequently encountered. A number of unusual foreign bodies have been described in literature, like ear rings, sewing needle, screw, whistle[6] and wrist watch[7] etc.

These foreign bodies usually lodge at the anatomical and physiological constrictions of the oesophagus. Dysphagia is nearly always present and is due to the size of the foreign body; inflammatory reaction and spasm is caused by its presence. At first there may only be slight difficulty in swallowing but later the difficulty becomes more pronounced. There is also regurgitation of food, saliva and mucus in later stages.

Management of oesophageal bodies depends upon the time period since impaction, nature and size of foreign body and the site of impaction. In recent years, alternative techniques for removal of blunt foreign bodies have been increasingly advocated. These include removal with Foley's catheter under fluoroscopy[8,9], flexible endoscopy[10] and pushing the foreign body into stomach with a bougie. Partial and ill fitting dentures are more commonly swallowed especially when the patient is asleep or under the influence of alcohol. Dentures in the esophagus present many hazards[11], so during endoscopy the hook should be manipulated in the lumen of the oesophagoscope before removal.

Small and blunt foreign bodies may pass spontaneously through oesophagus. The impaction of the ingested foreign material occurs exclusively in the oesophagus and it usually passes uneventfully through the rest of gastrointestinal tract[12,13]. X-ray before anaesthesia is always advised to locate site of foreign body in the oesophagus or the stomach. Idealy endoscopy should be carried out as soon as possible after the radiological examination.

Trauma due to foreign body leads to mucosal oedema and thus once foreign body is impacted and remains there for some time, it is unlikely to pass spontaneously[14]. Pushing of foreign bodies into stomach with bougies may be used for blunt and smooth objects in patients who are not suffering from pre-existing esophaageal disease. If used for sharp foreign bodies, this method may lead to complications. Post-operative pain, particularly when radiating to back between the scapulae, may indicate that perforation of oesophagus has occured during the operation. This may further be indicated by more marked dysphagia, particularly if painful and accompanied by pyrexia. Subcutaneous surgical emphysema in the neck or

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supraclavicular regions may be the first sign of perforation and neck should be examined for its presence routinely one hour postoperative and thereafter, if indicated. Perforation most frequently occurs at the cricopharyngeus or the cardiac sphincter. The former may require external drainage, the latter thoracotomy.

MATERIAL AND METHODS

Between June 1993 and May 1996, 175 oesophagoscopies were performed for removal of oesophageal foreign bodies in the Department of ENT, Rawalpindi General Hospital, Rawalpindi. Most of the patients presented in emergency with history of foreign body.

X-Ray neck and chest antero-posterior and lateral views were done in all cases. Complete blood picture and urine examination were also done. In patients above 40 years of age ECG, X Ray chest-PA view, blood urea and sugar estimates were also done.

There were 105 males and 70 females. The youngest patients was one month old while the oldest was 87 years of age. 128 (73%) patients were between the age of 2-7 years while 15 patients (9%) were between 10 and 40 years and 32 (18%) were above 40 years of age. The most common site of impaction was cricopharyngeus or just below it.

RESULTS AND DISCUSSION

In our series 130 (74%) of these patients were seen within 24 hours of the incident, 30 (17%) were seen between 24 to 48 hours and 14 (18%) were seen after 48 hours and maximum of 10 days. X -Ray neck (AP-LAT) view was done in all cases and foreign bodies were diagnosed by:

- Shadow in case of radio opaque foreign bodies e.g coins.
- Gas shadow below the cricopharyngeus.
- Widening of pre-vertebral soft tissue.

93% of cases of foreign bodies in oesophagus were diagnosed on plain radiography.

In patients of age group 2-7 years, coins[1-4] were most common foreign bodies and were present in 84 out of 90 patients. The most common site of impaction was cricophayngeus. The foreign bodies were removed easily by rigid endoscopy under G/A. In few cases, due to relaxation of cricophayngeal sphincter, coins passed down in to the stomach, which was confirmed later by plain radiography. Other foreign bodies removed were bone piece metallic zip , screws, whistle and a piece of wood.

In patients of age group 10-40 years meat bolus were most common and were present in 17 out of 20 cases (85%). Other foreign bodies were sewing needles and a metallic screw.

In patients above 40 years of age 28 (87%) cases were due to impaction of food bolus in the upper oesophagus. 3 (11%) patients presented with dentures. The incidence of foreign bodies rises in older people who frequently get lumps of meat stuck in the oesophagus by a combination of failing to chew properly, particularly if they are edentulous or wear ill- fitting dentures. Dentures themselves may be swollowed, particularly partial or ill fitting, especially when the patient is asleep or under the influence of alcohol.

All the endoscopies were performed under general anaesthesia. The common site of impaction was the cricophayngeus muscle 130 (74%). The other sites of impaction were where aorta crosses the oesophagus, where left bronchus crosses the oesophagus and the cardiac end. In 160 cases (91%) foreign bodies were removed by rigid endoscopy. In 13 (7%) cases the foreign bodies were found to have passed into the stomach due to muscle relaxation induced with general anaesthesia, while in 2 cases sewing needles could not be localized/removed on endoscopy.

There were three oesophageal perforations during these endoscopies and removal of foreign bodies. (Dentures 2 + bone piece-1). Two of these were managed conservatively and one needed thoracotomy and oesophageal repair. In one case hydro-pneumothorax was seen postoperatively which needed chest intubation under water seal. There was no death secondary to esophagoscopy in this series.

Rigid oesophagoscopy is still the best method for the removal of all types of oesophageal foreign bodies. After removal of foreign body, whole oesophagus upto cardiac end should be examined to ensure removal of the entire foreign body and recognition of any pathology e.g. growth, stricture, laceration, tear or perforation. We favour rigid endoscope as the preferred and safe method for removal of all types of foreign bodies from oesophagus.

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SCOPE OF ANTENATAL DIAGNOSIS OF CONGENITAL ABNORMALITIES IN THE DEVELOPING FETUS

Review Article

WAHEED A. HASHMI, MUNA BHUTTA, TAMSEEL S.A. AWAN, FARAH N. KHAN, FOUZIA SHAFIQUE, FAISAL H. KHAN, NAEEM-UZ-ZAFAR KHAN

ABSTRACT:
Every year millions of children around the world are born with different congenital abnormalities. It is a difficult problem to deal with, both for parents (emotionally and financially) and attending physicians. With the development of better ultrasound instruments and techniques, there has been a major breakthrough in the field of antenatal diagnosis of these problems. It is now possible to antenatally diagnose, manage and refer these patients to appropriate centers. Team work of pediatrician, obstetrician and ultrasonographer is needed to explain the significance of an antenatal abnormality. This article gives a brief account of what can be achieved during antenatal life with the help of ultrasound.

KEY WORDS: Developing Fetus, Antenatal diagnosis, Congentital abnormalities.

INTRODUCTION

An ultrasound probe energised by electrical impulse emits high frequency sound waves. When these waves strike an interface, some of the energy is reflected back and the magnitude of these echoes depends upon the difference in the densities of the tissues at an interface. Two echoes are displayed in their appropriate positions on the screen of the display unit. Two types of image formation are generally used, grey scale and real time. In grey scale sonography the magnitude of reflected echoes is displayed on the echogram, the depth of the colour represents the difference in the density of the tissues at the interface, thus a picture is obtained in grey colours. In real time sonography pictures at a rate faster than 15 frames per second are displayed on a screen and they give an impression of a moving image. Although ultrasound is said to have few side-effects, generally it is considered a completely safe diagnostic technique with no potential mutagenic and teratogenic side-effects, when the exposure is used within safe limits[1,2].

USE OF ULTRASOUND DURING PREGNANCY

Ultrasound has been extensively used during pregnancy, both for obstetrical purposes and to study the fetus. Transperineal and transvaginal probes along with transabdominal scan have been introduced to help in the early detection of fetal abnormalities[3,4].

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A fetal deceleration response, following acoustic stimulation, is associated with increased risk for adverse perinatal outcome and merits further evaluation[5]. Ultrasound is not generally accepted as a suitable index to study the fetus during the first trimester. Its use is mainly obstetrical during this time which includes outcome of therapy in infertile patients and investigation of women who have symptoms suggestive of abnormal pregnancy. Some uses of Ultrasound from the fetal point of view include appropriate fetal development, calculation of fetal age (based upon fetal biometry) and fetal morphology.

It is during the second and third trimester that the role of ultrasound in the diagnosis of congenital abnormalities in a developing fetus has been established. The use of ultrasound during this time has been divided into two phases:-

Phase 1

It is the routine ultrasound of abdomen during the early part of second trimester. From fetal point of view the importance of this ultrasound lies in the diagnosis of number of fetuses, fetal presentation and lie, fetal activity and fetal cardiac activity. This study is followed by detailed or phase II study if there are any signs of fetal malformation. These signs include:-

- Anhydramnios or oligohydramnios before 20 weeks of gestation.
- Polyhydramnios independent of gestational age.
- Early growth retardation (body size small for confirmed

gestational age below 20 weeks).
- Abnormal body shape
- Structural fetal anomalies (e.g. echo-free areas, cysts and other fluid collections)
- Discrepancies in size between parts of the body.
- Large placenta, placental thickness more than 6 cm at the apex, increased echogenicity or the presence of numerous sonolucent holes in placenta.
- An absent umbilical artery on ultrasound needs further investigation
- Abnormal pattern of fetal activity (decreased or increased).

Phase II

This is a detailed examination, usually done in cases when there is either a higher incidence (e.g., uncontrolled diabetes) or any indirect sign of fetal malformation. Almost all organs can be studied with the help of ultrasound at this stage. The fetus is scrutinized in six different planes:

- Plane 1 is at the level of lateral ventricles
- Plane 2 is the reference plane for fetal cephalometry
- Plane 3 bisects the upper extremity and heart and it is possible to view all the four chambers of heart
- Plane 4 identifies the reference plane between the cardiac plane and the umbilical vein in the abdomen.
- Plane 5 is used to examine the kidneys
- Plane 6 is used to visualize the bladder, genitalia and lower limbs.

From the 10th week onwards, the face can be studied by ultrasound, both in the frontal view and in profile. During the 12th week the lacunae are clearly seen. The mouth can be recognized between the 20th and 24th weeks. Eyes, mouth, nose, facial clefts and ears can also be recognized during this study. A new technique, which provides three dimensional sonographic visualization of fetal malformation using surface and volume, has recently been introduced to study the fetal face. It may become more useful in the near future[1,6]

The brain becomes ultrasonically visible in the 7th week. During the 12th week large echo-poor anterior horn of lateral ventricle can be seen. Using a paramedian sagittal scan, extent of the lateral ventricles, third ventricle, biparietal diameter (BPD), occipitofrontal diameter (OFID), hydrocephalus and pulsating cerebral arteries can be seen.

The spine is seen as two parallel ectogenic lines after twelve weeks of gestation. Vertebral ossification begins and can be identified at this time. Dorsal closure of the vertebral canal by the union of lateral laminae does not occur until the fourth month.

Heart and lungs are the main ectogenic structures seen in the thorax during third trimester. They appear more ectogenic than the liver. Fetal lung maturity can be studied by looking at the echo pattern, using different radio-frequencies. Fetal lung hyperechogenicity may result from uterobronchial tree obstruction with retention of mucoid fluid retention distal to the obstruction[7]. The diaphragmatic movements can also be seen.

A four chambered view of the fetal heart can be seen after fifteen weeks of gestation by a view through the anterior fetal chest. State of arteries, chamber filling. motion of septum secundum, tricuspid and mitral valves, status of the myocardium and ventricular septum can all be assessed with the help of a linear scan[8]. Heart is placed anteriorly and somewhat towards the left in the thorax. Ultrasonically, liver is the most prominent organ of the abdomen during the third trimester. The kidney is less ectogenic than the liver. Bowel loops can also be seen during the third trimester. Umbilical vein, hepatic veins and gall bladder are all visible at this stage. Estimation of the amniotic fluid volume is an indicator of the fetal renal function. Sonographic visualization of kidneys and urinary bladder is also possible. Scrotum and penis in males and labia in females become sonographically visible during the third trimester.

Limbs become visible during the third trimester. Femoral and tibial diaphysial lengths in relation to the gestational age is important. Thigh diameter is helpful in determination of the fetal weight. Examination of the plantar aspect of the foot helps in excluding Talipes equino varus.

Some important and useful fetal dimensions which can be measured sonographically are:-

- Head and cranial parameters: BPD, OFD, head perimeter, ocular biometry, lateral ventricle and hemispheric width.
- Thoracic and abdominal organs: cardiac dimensions, abdominal perimeter, kidney, kidney perimeter and abdominal perimeter, adrenal gland, spleen.
- Long bones, femur, tibia, fibula, humerus, ulna, radius.

Important and useful information concerning growth rate, fetal weight and gestational age can be obtained with the help of an ultrasound. Various formulae have been devised by different authors and the criteria used in them vary. Most authors have based their formulae for calculating fetal weight on ultrasound cephalometry, BPD and OFD. Gestational age is calculated by measuring crown rump length (CRL), BPD, femur length and length of other bones (e.g. humerus, tibia) binocular distance, head perimeter, abdominal perimeter and size and shape of fetal ears.

It is concluded that ultrasound is the method of choice for the assessment of fetal age and weight. Clinically satisfactory estimates can be obtained only if fetal age and weight are calculated separately. Gestational age should be confirmed with the help of an ultrasound during the first half of pregnancy. Earlier the estimates are made, the more correct they are. Difference of less than ten days is considered of no consequence. Analysis of growth abnormalities requires expanded ultrasound biometry and detailed evaluation of the fetus in serial examinations. Fetal weight is used to extrapolate birth weight[9]. This is particularly useful when signs of fetal growth retardation are seen.

SYSTEMIC MALFORMATIONS IN A FETUS

A host of abnormalities, conditions and defects exist in different parts of the body which can be recognized with the help of an ultrasound. These conditions may involve any system. Numerous neural tube defects can be identified antenatally. Absence of cerebral hemispheres can be predicted from the absence of an oval cranial vault. An absent cranial vault, inability to establish a reference plane for measuring BPD and large eye glass like orbits are signs of anencephaly. Polyhydramnios may occur with anencephaly due to increased secretion from the vascular membrane. Microcephaly (primary or secondary) is identified by a flat cranial vault between 16-20 weeks of gestation or a BPD which is less than two or three standard deviations. It is difficult to diagnose spina bifida in a fetus on ultrasound, signs suggestive of this problem are dilation of ventricles and separation or Y divergence of the lateral vertebral arches on a longitudinal scan. Normally ventricular/hemisphere (V/H) ratio increases more than 0.5 after 18 weeks of gestation. If in a fetus a converse ratio is noted, one should exclude other central nervous system pathologies.

Head and neck masses can be identified antenatally. These include intracranial teratomas, salivary gland cysts, dacrocystoceoles, thyroid teratomas, gingival granular tumours and hemangiomas[10,11]. Fetal goitre can be identified as a neck mass during the second trimester and treated by intra-amniotic thyroxine weekly which should decrease the thyroid size.

Although in the later part of first trimester abdominal wall defects can be seen, the best time to diagnose these problems is between 15 and 21 weeks of gestation. Omphaloceole, gastroschisis and ectopia vesicae can all be identified[12]. Ascites and polyhydramnios are commonly found along with them. Omphaloceole appears as a mass of variable size adjacent to the anterior abdominal wall[13] and if identified before 12 weeks of gestation, one should opt for termination of pregnancy. Whenever gastroschisis is suspected, measurement of the abdomen/chest ratio is the best criteria to rule it out. Proximal bowel atresia, malrotation, choledochal cyst, mesenteric cyst, meconium ileus, microcolon, anal atresia, and ovarian cyst all appear as fluid-filled cystic intra-abdominal structures on ultrasound[14]. Meconium peritonitis can also be recognized[15]. Intestinal changes seen on ultrasound increase the chances of bowel atresia and increase the morbidity and mortality of the infant[16]. Signs of hyper-peristalsis and perforation (ascites, fibrin, fleks etc) should be looked for. Choledochal cysts can also be identified antenatally with the help of an ultrasound after 27 weeks of gestation[17].

Signs of diaphragmatic malformations such as mediastinal displacement, cardiac displacement and pulmonary compression can be recognized antenatally on ultrasound. Congenital diaphragmatic hernia can be recognized using varying ultrasonic radio frequencies[18,19]

It is difficult to diagnose esophageal atresia antenatally. Usually no fetal swallowing movements are seen. In esophageal atresia with no fistula, polyhydramnios may be present and the small sized stomach is not visible even on serial examinations.

Ultrasound has a sensitivity of 85.8% and specificity of 48.1% in the antenatal diagnosis of urogenital anomalies, which are found twice more commonly in males than in females. 1.87% of the patients with urological anomalies have chromosomal defects[20]. The presence of normal amount of amniotic fluid is an indirect indicator of normal development of the urinary system. Hydronephrosis is the most common anomaly identified. Renal pelvis of more than 10 mm beyond 28 weeks of gestation, in the absence of ureteric and bladder dilation, means upper urinary tract obstruction. Size between 5-10 mm should be confirmed by a second ultrasound during the third trimester[21]. Renal pelvis and parenchyma can be seen and differentiated between 20-30 weeks. Polycystic kidneys (bilateral), multicystic kidney (unilateral) and urinary tract obstruction (dilation proximal to the obstruction, thickness of the bladder wall and amount of the amniotic fluid) can all be identified. Ultrasound done at or later than 26 weeks of gestation may reveal bilateral hydronephrosis and hydroureter leading to the diagnosis of posterior urethral valve[22]. Uroteroceole may be diagnosed antenatally with the help of an ultrasound, but the diagnosis is extremely difficult[23]

Fetal deformities of the upper and lower limbs may be seen with the help of an ultrasound. The most common anomaly identified is radial aplasia. Skeletal dysplasia can be diagnosed on finding reduced length of the long bones (e.g. femur) during the second trimester. Identification of the type of anomalies of/on bones (shape, thickness, contour, spinal ossification disorders and under mineralization) is helpful in determining the type of dys-

plasia[7]. Some malformations which are incompatible with life can also be identified; they include chondrogenesis type 1, achondrogensis type II and osteogenesis imperfecta. Dislocations have also been identified antenatally on ultrasound [24].

Cardiac lesions can easily be identified using real time B mode used for usual obstetric examination instead of M mode and Doppler flow analysis. It is possible to measure the transverse diameter of heart at the level of the atrioventricular valves. Numerous cardiac anomalies can be identified. Portocaval shunts can also be diagnosed[25]. Diagnosis of acardia in a monozygous twin has also been reported[26]. Cardiac anomalies may give rise to numerous secondary problems which can be identified antenatally with the help of an ultrasound. These include increased diameter of intrahepatic, subhepatic and umbilical veins, pericardial effusion, skin edema, ascites, pleural effusion, hydramnios and placental edema. Chylothorax can also be recognized by an ultrasound during pregnancy[8].

Cystic adenomatoid malformation of lungs can also be seen and identified due to increased hyperechogenecity of the tissues in late pregnancy[27]. Detailed and early echocardiographics study using better equipment, which includes both sector and linear scanners with video recording, may be required if the following conditions exist.

- Family history of congenital cardiac defects and other malformations associated with cardiac defects; a history of excessive exposure of mother to alcohol, radiation, certain viral infections and long standing insulin dependent diabetes (class D and F) with vascular complications[28].

- Fetal anomalies, especially cardiovascular anomalies (dysrthmias, hydrops fetalis), intra-uterine growth retardation, VACTERL, anomalies and increased serum and amniotic fluid levels of alpha feto protein also merit fetal echocardiography.

Echocardiography at 17-20 weeks provides sufficient time for further investigations and abortion of the fetus, if required.

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CHYLOUS MESENTERIC CYST

A CASE REPORT

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ABSTRACT:
Mesenteric cyst is a rare but well known entity in the medical world. Even rarer are the chylous type of mesenteric cysts. Though the treatment of a chylous cyst is easy and at present without any risk of mortality or morbidity, diagnosis of the cyst pre-operatively remains a rare occurrence. The patient usually presents with vague abdominal complaints resulting in failure of the treating physician to make a definite diagnosis. Most of the cysts are therefore, diagnosed at surgery. A case of mesenteric chylous cyst diagnosed at surgery is presented. Also discussed is the utilization of radio-imaging to diagnose the cysts pre-operatively.

KEY WORDS: Mesenteric cyst, chylous cyst, marsupialization.

INTRODUCTION

Even though they continue to be rare, chylous cysts are well known to the surgical profession. The first description of mesenteric cyst was by Antonio Benevieni[3], in 1507, during autopsy of an eight year old boy. The cyst was operated on for the first time in 1880[9]. Successful treatment of the cyst by marsupialization followed shortly.

Mesenteric cysts occur in about 1 in 140,000 hospital admissions(0.0007%)[1]. According to two different reports, seven cases were found in one million[4] and 21 in a total of 3 million hospital admissions[5]. Among mesenteric cysts, chylous sub-type is even rarer[6]. Though the exact incidence of the chylous cyst is not known, in a study of 42 cases of mesenteric cysts only 12 (28.5%) were found to be of chylous type[7]. The reported incidence of all types of mesenteric cyst being 0.0007%, ; rarity of chylous mesenteric cyst can be imagined.

CASE REPORT

A two years old male child presented with the complaint of gradual, non-tender distention of abdomen (Figure 1) noticed for 20 days. On questioning, the child was also found to have a history of weight loss, anorexia, along with a vague history of oliguria and constipation.

Fig. No. 1. Patient in the supine position showing abdominal distention.

On examination the patient was found to be a pale child with normal vitals and no lymphadenopathy. Abdominal examination revealed a tense, non-tender distended abdomen. However, on palpation no mass could be felt. The abdomen was dull on percussion and fluid thrill was present. Bowel sounds were sluggish. Provisional diagnosis of ascites or a large omental or mesenteric cyst was entertained.

On investigations, chest-X-ray was normal. Abdominal X-ray showed a large mass effect with displacement of the intestinal loops peripherally. An IVP done showed bilateral hydroureter and hydronephrosis. On ultrasound the distention was thought to be due to gross distention of the pelvis of right kidney due to pelvi-ureteric junction

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obstruction. Barium meal and follow-through revealed compression of the greater curvature of the stomach tenting it in an open umbrella like fashion. (Figure 2) The transverse colon was compressed towards the pelvis, however, the passage of barium was free.

Fig. No. 2. Pre-operative barium meal and follow-through revealing compression of the greater curvature of the stomach tenting it in an open umbrella-like fashion.

On exploration via a transverse upper abdominal incision a large chylous cyst was found arising from the root of the mesentery with the entire omentum, posterior wall of the stomach and the transverse colon plastered onto the wall of the cyst. The cyst was filled with a thick whitish milk-like fluid. (Figure 3). The cyst was dissected free of the adjacent viscera and its origin was traced to the origin of the superior mesenteric vessels in the left paravertebral region. (Figure 4). On histology the cyst was reported to be a chylous cyst.

Post operatively the child recovered uneventfully and has remained symptom free since.

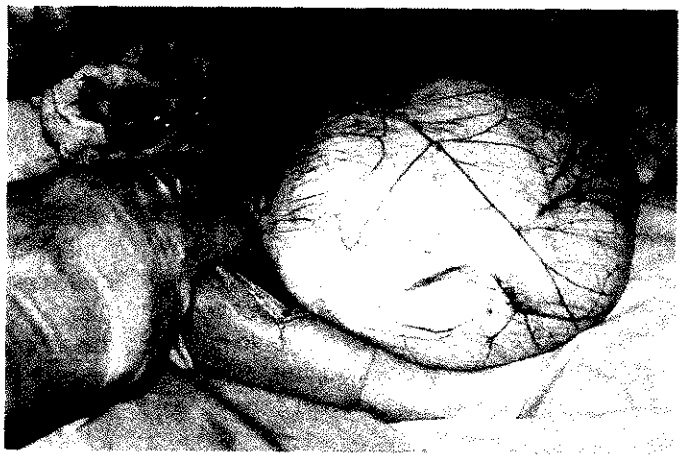

Fig. No. 3. Chylous cyst being taken out of the abdomen.

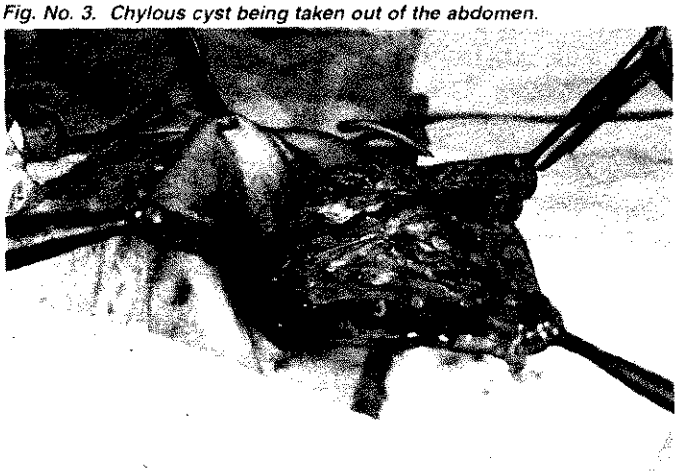

Fig. No. 4 The posterior wall of the stomach and the mesentery after the removal of the cyst.

DISSCUSSION

27.1% of the total cases occur in the 1st decade of life [8,9]. 12 to 18 cases occur in each of the next four decades. Less than 13% cases are reported in patients over 50 years of age. Among children more males than females were found to have the chylous cyst. (1.7:1)[9,10]. However, in a similar report including adults there were fewer males than females. (1.1:6)[8].

Various origins have been suggested for the mesenteric cyst[11]. However, as far as the Chylous Mesenteric Cysts are concerned they do not have a common mode of origin but arise from several sources[4]. Despite this, their lymphatic origin is beyond question[1,12,13]. Though the cysts may arise from the ileal, jejunal and the colonic mesentery, jejunal and ileal mesenteries are involved more often[13,14]. Majority of the chylous cysts, being lined with endothelium arise from lymphatic spaces associated with embryonic retroperitoneal lymph sac.

Various circumstances may alter the contents of the chylous cyst[1]. The contents, therefore, are not a reliable means of ascertaining the origin of the cyst[15,16]. However, its milky appearance is thought to result from the fatty

degeneration in the cyst. Lymphangioma of the mesentery is apparently a true neoplasm of lymphatic system similar to those found in other parts of the body (cystic hygroma). Grossly and histologically it is difficult to differentiate these tumours from the chylous cysts and the two are often grouped in the same category[13,17].

Mesenteric cysts may be single, multiple or loculated but mostly are single with thin walls lined with squamous, cuboidal or columnar endothelium. Wide variations in size have been reported[19,22]. The largest reported had a volume of 13 liters. Chylous cyst should not be confused with chylous-thorax or chylous ascites, which can not only be much larger, but are also much commoner.

Pain is the presenting complaint in about 80% of the patients[18] and is usually due to pressure, leakage or traction of the mesentery[19]. Nausea and vomiting are reported in another 50% cases followed by constipation in 25%[18]. Rarely, the patient presents with a mass.

In the absence of these intestinal symptoms, the only clinical finding would be the presence of a non-tender, highly mobile, intra-abdominal mass varying in size from a few centimeters to one completely filling the cavity[13]. However, a palpable mass is present in only 25% of the cases.

The chylous cyst presents with such vague symptoms that diagnosis is not suspected despite a careful history and physical examination. Pre-operative recognition of this condition, therefore, is rare[1,20].

A careful interpretation of the available radiological studies may make the pre-operative diagnosis possible. A plain X-ray may show a shadow displacing the intestines while fluoroscopy may demonstrate mobility of the mass[13]. A barium radiographic series may outline the position of the mass[21]. Imaging techniques are useful means for diagnosing these intra-abdominal cysts. On ultrasound, it appears as a well outlined, sonolucent transonic abdominal mass[13,22]. CT differentiates it as a non enhancing, near water density mass from a solid tumour which appears as a sheet-like mass of greater density[13].

Surgical excision and enucleation is the treatment of choice,[1,2,13,20] unless the blood supply to the intestine is involved, in which case segmental resection with end to end anastomosis may be unavoidable[23].

Marsupialization has been considered obsolete but may be the only option available for huge cyst adhering to the viscera[13,24]. Drainage or aspiration are theoretically ineffective although they may be necessary before removing the cyst[1].

Mortality for all procedures up to 1950 was 12.4%[8] but where enucleation, resection or Marsupialization was employed, only 14 out of 139 patients died. Currently mortality from treatment of mesenteric cysts should not occur[25,26].

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SMALL INTESTINAL CARCINOID

A CASE REPORT

FASIA BASIR, S.M.MUNIR, AZHAR CHOUDHARY, ASADULLAH KHAN

ABSTRACT:
A case report of small intestinal carcinoid with no hepatic involvement and absence of carcinoid syndrome, despite its large size, is presented. The case was operated with good results.

KEY WORDS: 5HIAA, MIBG, Carcinoid Syndrome.

INTRODUCTION

Cardcinoid tumours are the most malignant tumours of the small intestine but are relatively rare and account for less than one percent of all cancers[1,2]. These tumours arise from the neuroendocrine cells throughout the body, but ninety percent arise in the gastrointestinal tract. Small intestinal tumours tend to have a more malignant course as compared to tumours arising from other sites. Presentation of a gastrointestinal carcinoid is either with bleeding, abdominal pain, intestinal obstruction or with the classical triad of cutaneous flushing, diarrhoea and valvular heart disease, which comprises the Carcinoid Syndrome[3].

CASE REPORT

A 24 year old man presented with one and a half years' history of pain and swelling in the epigastrium and a single bout of haematemesis. Patient's illness started with a dull ache in the epigastrium with weight loss but without any other accompanying symptom, which subsided in a few days with medication. After remaining symptom free for months, when he experienced similar pain again, he took various medications (unknown), including treatment for liver abscess, but did not improve. This went on for a year and a half, when he presented to us with the same complaints of pain and swelling, which had increased in size, accompanied by significant loss of weight.

On clinical examination, the young man who looked ill, was anaemic and had a palpable mass in the epigastrium, which was ten to eleven centimetres below the xiphisternum with smooth surface, firm consistency and edges not distinctly felt. Liver was palpable. Ultrasound revealed a mass around the second part of the duodenum with no focal mass in the liver. Fine needle aspiration biopsy of the mass was performed. The immunohistochemical studies revealed a carcinoid tumour. The patient refused treatment at the time, but came back after six months with same complaints.

His haemoglobin was 8gm, ESR 55, alkaline phosphatase 2051U and urinary 5HIAA 16.6 (normal 3-17). Upper GI endoscopy and echocardiography were unremarkable. Ultrasound was repeated but was inconclusive for metastases. Radioisotope Tc 99 scan revealed a large cold area in the gall bladder bed area. CT scan revealed a mass in the epigastrium suggestive of duodenal neoplasm compressing on the liver and gall bladder and no metastases in the liver or lymph nodes.

Patient underwent surgery, the mass seen was a multilobulated 15 x 13 x 7cms in size (Fig: 1) arising from the lateral side of the second part of duodenum. Whipples

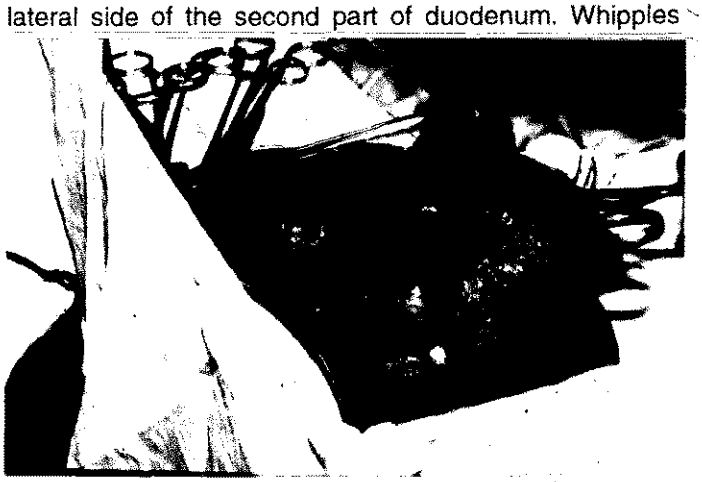

Fig. No. 1. Gross appearence of the large lobulated tumor/mass

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procedure with cholecystojejunostomy was performed. Hepatic artery was involved, which was resected and end-to-end anastamoses was done. Histopathalogical report confirmed carcinoid tumour. (Fig: 2+3) After surgery, the patient was relieved of pain; he started gaining weight and was ready to go to work in a couple of months. Patient is well after two years of surgery.

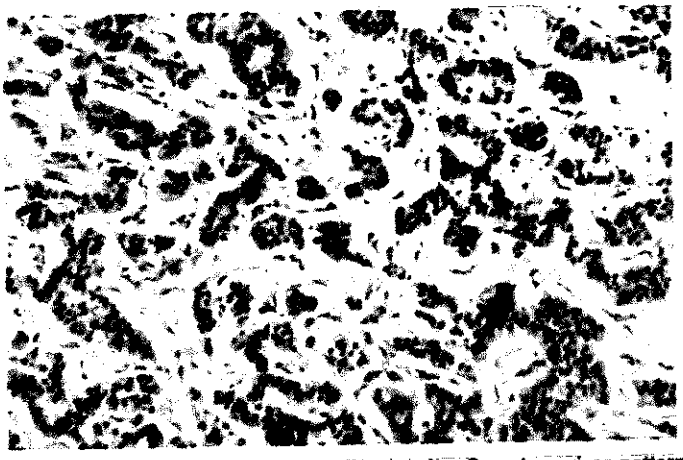

Fig. No. 2. Microscopic appearance showing Pseudo acriver pattern seperated by fibrous bands and torn out smooth muscle bundles.

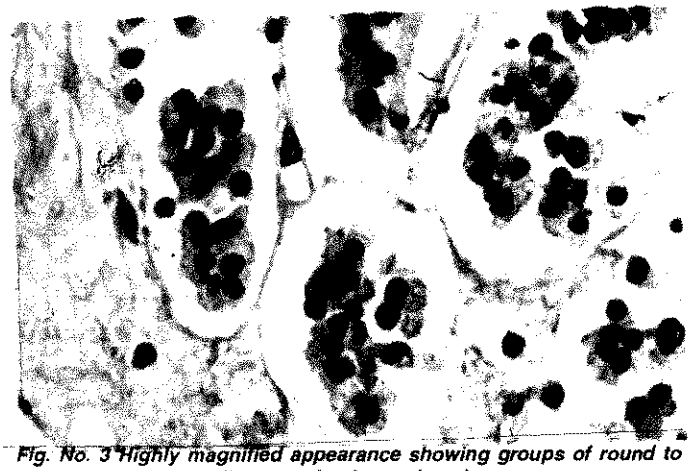

Fig. No. 3 Highly magnified appearance showing groups of round to oval monotonases cells appearing in varying sizes

DISSCUSSION

Carcinoid tumours were first described in 1888 by Lubarsch[4]. These neuroendocrine tumours are present throughout the body, mostly in the gastrointestinal tract and the most common site in the gastrointestinal tract is the appendix, followed by the small bowel and the rectum[5]. Small intestinal tumours are more malignant as compared to gastrointestinal carcinoid. Local transmural invasion, early metastases to lymph nodes and liver and symptoms from hormone secretion are common.

Relatively little is know about the epidemiology of carcinoid tumours in contrast to the extensive information available on the biochemical effects, which are mainly due to the biologic amines and polypeptide hormones secreted by tumour cells, which produce the carcinoid sydrome[6]. The severity of this syndrome is directly related to the tumour bulk draining into the systemic circulation. This always implies hepatic metastases[7]. Literature review reveals that metastases is found in hundred percent of tumours larger than two cms in size[3].

Even though endoscopy, barium studies and CT scan allow anatomic localization, but where tumour cannot be detected, imaging with radiolabelled MIBG or octreotide may be useful. Despite this improved detection of tumour, the pathalogic identity is usually not suspected before resection or liver biopsy. Elevation of plasma and platelet serotonin and urinary 5HIAA is usually found in patients with clinical features of carcinoid sydrome. In such situations, urinary 5HIAA is the most useful diagnostic tool.

When non specific abdominal complaints occur and cause is not found, especially if there is failure to evaluate the small bowel (which is a blind spot) on routine endoscopic and radiological diagnostic tests, it would be wise to include these tumours in differential diagnosis. Early diagnosis of small intestinal carcinoid provides the best probability of cure[8]. In the presence of carcinoid syndrome, treatment with interferons now somatostatin analogue, octreotide have given good results in controlling the symptoms. Unfortunately, they have proved disappointing in terms of tumour regression. Surgical resection remains the corner stone of therapy[9].

In the case presented, despite its large size, it had no liver involvement and did not produce the classical carcinoid syndrome. The tumour was diagnosed in time and successfully resected before metastases.

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FEMALE HYPOSPADIAS

A CASE REPORT

PARKASH MANDHAN, JAMSHED AKHTAR & ABDUL AZIZ

ABSTRACT:
Female hypospadias is an anomaly in which urethral meatus is located on the anterior vaginal wall. A case of distal female hypospadias with ectopic pelvic kidney is reported, in which the symptoms were dysuria, fever and dribbling after micturition due to pooling of urine in vagina, the opening of which got narrowed due to synechial adhesion. Following division of synechiae the symptoms resolved. Embryology of urogenital sinus is reviewed and development of female hypospadias is discussed.

KEY WORDS: Female hypospadias, urinary continence, embryology.

INTRODUCTION

Hypospadias in girls is an uncommon anomaly. Generally, the vaginal introitus appears normal upon initial inspection, but the urethra is noted to be further recessed on the anterior vaginal wall. Symptoms are related to urinary tract infection and dribbling after urination secondary to vaginal pooling[1]. The embryology of female hypospadias may involve two different structures responsible for proximal and distal types of female hypospadias. In this report we describe our experience of one such case.

CASE REPORT

A 3-year-old girl presented with dribbling of urine following micturition which was noticed by the parents when baby was one year of age. Patient also complained of dysuria. In neonatal period, a cut back anoplasty was done for anocutaneous fistula at another hospital. On perineal examination, anteriorly placed anus was found. The labial folds were normal and a single opening was present in the vestibule. Further examination was planned under anaesthesia. Urine was sent for detailed examination, culture and sensitivity, which revealed growth of E. Coli. Ultrasound of urinary tract showed an ectopic (pelvic) right kidney that was small in size with no hydronephrosis. The left kidney was normal in size, shape and position. Intravenous urography (IVU) revealed normal functioning kidneys with right kidney in ectopic position (Fig-I). Patient was put on antibiotics. A week later she was examined under general anaesthesia. There were multiple blind pits in the vestibule and the urethra was not present in its normal position. Per rectal examination was normal.. Vaginoscopy and cystoscopy were also performed. Vaginal orifice was small with a synechiae extending for few centimeters proximal into the vagina. The urethral opening was located on anterior vaginal wall just proximal to the introitus. On examination of urinary bladder, the right ureteric orifice could not be visualized, but left orifice was normal in shape, size and position. The synechiae were divided and foley's catheter was passed and

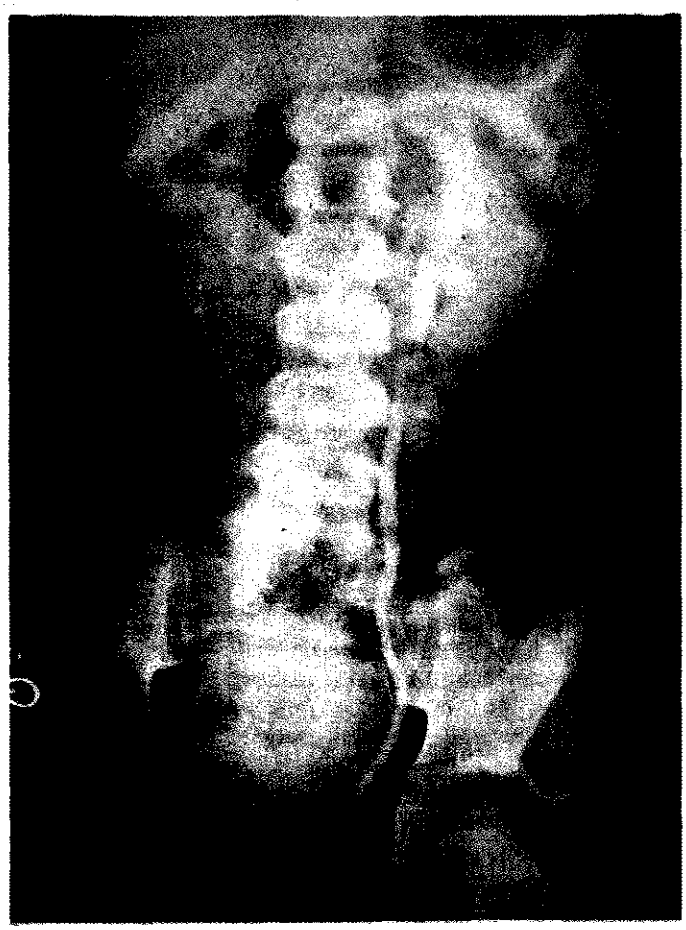

Fig. No. 1. IVU showing normal functioning both kidneys with right kidneys in ectopic position

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retained. Post-operatively antibiotics were continued. Foleys catheter was removed on the 5th day.

She was observed for dribbling and wetting, but she remained dry. She was discharged with an advice for follow up in clinic. In her last follow up (3 months after surgery) she was dry with sterile urine and off medication.

DISSCUSSION

Female hypospadias with no other genitourinary abnormality is rare. It is an abnormality of the urethra, with the urethral meatus located at any site on the anterior vaginal wall from just above the introitus up to the vaginal fornix. It may be distal, or proximal. Its incidence is difficult to assess because many cases are incorrectly labeled as urogenital sinus.

The consequences of hypospadias depend on the site and caliber of urethra. A urethra of normal caliber is more likely to have its meatus close to the introitus[2], as in our case. This type may be asymptomatic and is first noticed when attempts are made to catheterize the patient for any reason. It may present with post-micturation incontinence, dribbling after urination secondary to vaginal pooling, recurrent UTI and with the urethral syndrome - frequency, dysuria, urgency and difficult sexual intercourse, in post puberty. Occasionally, more severe meatal stenosis and obstruction can occur, and patients may present with urinary outflow obstruction, urinary tract infections, hypertension and obstructive uropathy. Severe female hypospadias is usually associated with other urogenital anomalies, like female pseudohermaphroditism[3], neurogenic bladder [4] and with cloacal abnormalities[5].

The embryology of female hypospadias may involve two different structures responsible for various types of female hypospadias. Knight et al[6], has attempted to clarify the difference between a urogenital sinus and a proximal or distal female hypospadias. By the 7th week of gestation, the cloaca is divided into ventral urogenital sinus and dorsal hindgut. The urogenital sinus is a common channel into which both urinary and genital tracts open. The vagina is developed partly from the fusion of two mullerian ducts (upper two thirds) and partly from the urogenital sinus (lower one third). The female urethra is derived from the urogenital sinus cranial to Mueller's tubercle, while its dorsal wall is formed from the Wolffian ducts as they migrate caudally[7,8]. The more severe proximal hypospadias is thought to be caused by a defect in the Wolffian tissue diffrentiation, (defect in posterior urethral wall, as in some male posterior urethral valves), while the distal hypospadias is believed to be caused by abnormal urogenital sinus development (Fig. 2).

Normally, continence is maintained in these girls, whereas an infrequent patient with an extremely short urethra may have urinary leakage. The management varies according to the type and severity. In the distal female

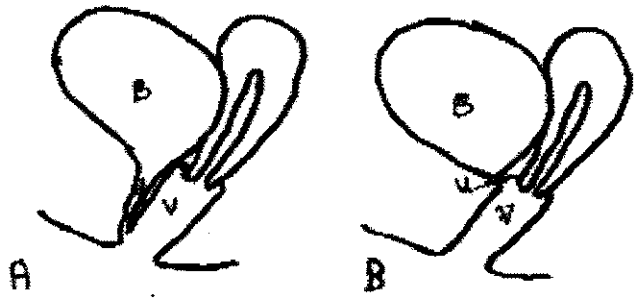

Fig. No. 2. Types of female hypospadias (A) Distal variety (B) Proximal variety (B-bladder, U-urethra, V-vagina)

hypospadias, the orifice is of normal caliber and require less constructive procedure. In severe narrow orifice, initially the urinary outflow obstruction is relieved by suprapubic catheter or temporary vesicostomy, and in later stage a neourethra is constructed, either by perineal pedicle flap 9-10 or with use of buccal and bladder mucosa[4].

In our case prolonged vaginal pooling of urine produced inflamation leading to synechial adhesion between vaginal walls and resulted in narrowing of introitus thus precipitating further stagnation of urine. Simple division of synechiae and with growth of baby, who now voids in squatting position, it relieved her of post micturition incontinence. She is followed up regularly and parients are also told as to what could be the problems of abnormally placed urethral opening in future. At present a careful watch is advised.

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CAUDAL DUPLICATION (DIPYGUS):
(A RARE ENTITY)
A CASE REPORT

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ABSTRACT:
Caudal duplication is an uncommon condition. A male neonate was born with an incomplete parasite having well formed lower limbs and pelvis with external male genitalia attached to the abdomen at the epigastrium. Autosite had omphalocele, cleft lip and cleft palate. Parasite was excised without any difficulty and omphalocele was managed conservatively. Cleft lip and palate repair was planned at a later date. Epigastric hetropygus with omphalocele, cleft lip and palate is not reported in literature before.

KEY WORDS: Dipygus, Caudal duplication.

CASE REPORT

A full term male neonate weighing 3.5 kg was brought to Liaquat Medical College Hospital Hyderabad on 2nd day of life. He was the sixth child of a 30 year old mother. Pregnancy was uncomplicated and no congenital anomalies have been recorded in the family previously.

Clinical examination showed a healthy autosite with cleft lip, palate and omphalocele. The parasite was incomplete having well formed pelvis and lower limbs, scrotum with testes (Fig. I). There was no anal or ureteral opening in the parasitic pelvis, No movements were observed in the limbs and joints were stiff. Radiology examination showed fully formed limbs and pelvic bones.

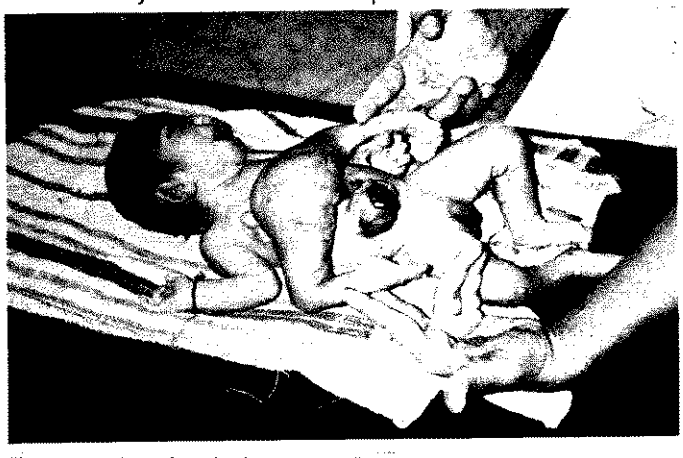

Fig. No. 1. Autosite with incomplete Parasite

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Surgery was performed electively after thorough investigations. An elliptical incision was made on the skin bridge between parasite and autosite. Blood supply to one part of intestine present in parasite pelvis was coming from autosite. The gut had no communication with that of the autosite. No other viscera was found in the parasite. Parasite was separated easily and residual defect closed. The omphalocele was managed conservatively by applying pyodine locally. Post operative recovery was uneventful. Cleft lip and cleft palate surgery and further management of omyoahocele will be undertaken at a later date.

DISSCUSSION

Conjoined twins are classified as symmetrical or asymmetrical. The asymmetrical is known as hetopygus. Heteropygus twinning is a rare malformation. In most of the cases of caudal duplication, the incomplete parasite is found attached to the hypogastric region. The first operated case of dipygus described in literature was reported by Rowe et al in 1968[1]. Spitz et al described a male infant with ruptured omphalocele, two sets of external genitalia and four lower limbs[2]. Simpson et al described female infant with omphalocele, two sets of external genitalia, two anal openings, four lower limbs and complete situs inversus[3]. Fraser reported two infants with polymelia. The well formed limbs were attached to the perineum[4]. Surendran et al managed male infant with two additional lower limbs with pelvis and external genitalia, that were attached to the thorax at the xiphisternum[5]. Braun et al described male infant with four lower limbs and one pelvis. The two lateral legs appeared normal, but the two medial limbs were abnormally shaped, did not move on

stimulation, and had no palpable femoral pulse[6].

Our patient differs from previously described surgically treated cases of dipygus by the attachment of normal looking lower limbs and pelvis at epigastrium with cleft lip and cleft palate and omphalocele.

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PRIMARY NASAL TUBERCULOSIS

A CASE REPORT

S. TARIQ RAFI & NAILA TARIQ.

ABSTRACT:
Primary Tuberculosis of the nose is a rare entity. Very few cases are recorded in literature. Tuberculosis of nose may either be secondary to tuberculosis elsewhere in the body or may be only affecting the nose, called Primary Nasal Tuberculosis, which though, a rare condition, is on the rise for the last decade. In the West association with HIV infection is believed to be the contributing factor, but in our country it is the influx of Afghan refugees.

KEY WORDS: Primary Nasal Tuberculosis, Nasal Tuberculosis

INTRODUCTION

Tuberculosis of the nose is an uncommon condition, specially primary nasal tuberculosis is very rare.It was described by Clarke in 1876 (Sim et al)[1]. It is a disease commonly seen in middle or old age and has a slight female preponderance. HIV and TB have specific interaction with each other and Aids is on the rise in Pakistan. More then the influence of HIV, it is probably the influx of a large number of Afghan refugees who have one of the highest incidence of tuberculosis in the world.

The causative agent of nasal tuberculosis is Mycobacterium tuberculosis, both human and bovine types[2].

The common clinical presentation of Nasal Tuberculosis is nasal obstruction, epistaxis, fetoid nasal discharge, crusting and occasionally pain and septal perforation.

On examination it may present either as nodular or ulcerative lesion and the diagnosis can be confirmed only by histology or presence of Acid fast bacilli in the discharge.

CASE REPORT

A fifty year old male presented with history of obstruction of the right nostril, with excessive crusting and intermittent discharge, often blood stained and foul smelling. The symptoms were present for the last 6 months, there was no history of weight loss, cough, lethargy or other significant complaints. On examination, the patient had deviated nasal septum with nodular swelling on the right side of the septum, extending from the muco-cutaneous junction for about 0.5 cm backwards and was partly obstructing the nasal cavity. The swelling was firm to touch and there was no bleeding on touch; the swelling was not mobile and its sensations were reduced. It was covered with a grey crust. On removal of the crust, the under-lying swelling was dirty brown in colour and there was collection of purulent discharge on floor of the nose. Rest of the right nostril was normal; the left nostril was normal. On palpation no neck glands were palpable. On auscultation the chest was clear.

Investigations showed patient being slightly anaemic with Hb of 10.2 gms % and ESR 70mm/1st hour. Other hematological investigations were normal. Nasal swab sent for detection of AFB was negative, X-ray PNS and X-ray chest were clear. Mantoux test was negative. A complete excision of the mass under general anaesthesia was done and surrounding healthy mucosa of the nasal septum was also removed. The underlying septal cartilage was apparently healthy. The mass was sent for histopathology which showed it to be tuberculous. Investigations were carried out to locate the presence of pulmonary or any other tuberculosis, but all were negative and thus it was labelled as primary nasal tuberculosis. Patient was placed on anti-tuberculous treatment for 9 months and was followed up fortnightly for one month and then monthly for the remaining period of treatment. LFT, Blood Urea, Serum Creatinine and Audiogram were done before and after starting the treatment. During the course of treatment patient developed septal perforation involving the cartilagenous part, which was about 1cm in diam-

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eter. After a month of treatment patient stopped having purulent discharge and the perforation also did not increase in size. After completion of treatment patient felt much better with no nasal obstruction or epistaxis and there was no supra tip depression or any other external deformity. There was slight crusting around the edges of perforation which was taken care of by application of ointment. The secretion from site of nodular mass was negative for AFB and the patient was declared cured.

DISCUSSION

Primary Nasal Tuberculosis is a rare disease and as such not much literature is available on the topic, both nationally and internationally. It was first reported by Clarke.

The incidence of tuberculosis is on the rise in the last decade and in our country the influx of Afghan refugees and low socio-economic conditions[3] have been major contributing factors, rather than HIV in the West. The average age has been suggested to be middle age[4]. If there was no history of contact with a tuberculous patient, the usual method of acquiring the infection is either by inhalation or local inoculation by one's own figures. Local inoculation is probably most common method of acquiring infection especially among those who have the habit of picking their noses. Dissolution of the septal cartilage causes septal perforation[5] but the involvement of bony septum is rare in tuberculosis[6].

The lesion can either be nodular or ulcerative, but usually may start as nodular and later become ulcerative with red oedematous area, alongwith thin yellowish discharge. If not treated, the ulcer may progress to cause septal perforation and nasal deformity. Diagnosis is confirmed by histology and by demonstration of Acid fast bacilli. The treatment is given as an out-patient with routine Anti tuberculous drugs for a period of nine months. Regular follow up is advised and LFT and audiogram done on monthly basis. The disease, if untreated, may spread to involve the maxillary antrum or the naso-lacrimal duct and the lateral wall. The patients are usually anaemic with raised ESR and positive Mantoux test.

To conclude, Primary nasal tuberculosis is a rare disease but should be kept in mind if a mass is detected in the nose. The disease if timely treated, can be completely cured without any significant complication.

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