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EDITORIAL

CHANGING PATERN IN EVALUATION SYSTEM

With advances in all fields of science and art, education system is also affected and new modes of teaching and training are being introduced to keep pace with contemporary requirements. Similarly, evaluation method of trainees at the end of training programme is changing. Previously our evaluation system was based on old British pattern that was entirely examiner's progrative. Presently more and more stress is laid on eliminating subjective bias of the examiners. The evaluation is now more objective and probably content coverage has also increased. More stress is being laid on formative assessment rather than summative and most of the institutions are using both the strategies with different weightage.

The College of Physicians & Surgeons Pakistan, being trendsetter in many fields, has gradually introduced the latest system of evaluation in its Membership & Fellowship examinations (MCPS & FCPS). Objectively structured clinical examination (OSCE) is now being introduced in many examinations. Similarly, viva voce in now properly structured and examiners are required to prepare short questions before hand and the same questions are asked from all the candidates so that uniformity is maintained and comparison becomes easy. Another important step in this direction is allotment of equal time and marks to all the examiners and no one can influence an examiner in his judgement. To further enhance transparency and to eliminate human bias, a Censor monitors all the examination activities during the conduct of practical examinations, without interfering. He submits his report independently. All the examiners are required to submit their results individually to the Convener who hands them over to the Controller of Examinations.

It is too early to predict the validity and outcome of this new system of evaluation but it can be said that this new system will definitely make examinations more objective, reliable, transparent and valid.

ABDUL AZIZ

ELASTIC RUBBER BAND LIGATION: OUT DOOR MANAGEMENT OF HAEMORRHOIDS

GHULAM ASGHAR CHANNA, ABDUL RASHEED CHOUDHRY

ABSTRACT:
Five hundred patients with uncomplicated haemorrhoids were treated by elastic rubber band ligation, in the Outdoor Patient Department of Surgical Unit-III, JPMC, Karachi. Haemorrhoids at all the three primary sites were ligated in the same session, with good tolerance and acceptance by the patients. Long term follow up (> 5 years) was done in most of the patients, with relapse in 3.7% of cases. We found outcome of band ligation quite satisfactory; with easily managed post procedural problems and recommend this as an alternate to operative therapy in otherwise uncomplicated haemorrhoids.

KEY WORDS: Band Ligation, Haemorrhoids, Non-operative.

INTRODUCTION

A number of operative and non-operative methods are available for treatment of haemorrhoids. Surgical procedures like open or closed haemorrhoidectomy require hospital admission and are commonly performed under general anaesthesia. The pain scores remained same even though lateral internal sphincterotomy was done to overcome the anal spasm supposed to contribute considerably to postoperative pain in patients undergoing haemorrhoidectomy without sphincterotomy[1,2]. Radical haemorrhoidectomy allow free drainage of wound but is associated with complications, postoperative pain and long hospital stay. Open haemorrhoidectomy was being practiced commonly in all the three units of Surgical Department in Jinnah Postgraduate Medical Center, Karachi, till we offered elastic band ligation as the outdoor treatment for patients on waiting list for this surgical procedure from January 1991 onwards. The purpose of this study was to treat the condition in the outdoor setup without admission in hospital, the use of general anaesthesia and to circumvent the complications known to occur in open haemorrhoidectomy.

PATIENTS AND METHODS

Patients with uncomplicated haemorrhoids waiting for surgery and registered from January 1991 onwards were offered this treatment. A programme for the proposed treatment and information for the availability of the facility was circulated to all the hospital units in order to get referral of patients.

Brief history, clinical examination and investigation were recorded on a proforma. Diagnosis was established on clinical grounds and in selected cases sigmoidoscopy and / or barium enema was performed to exclude the possibility of other underlying diseases causing bleeding per rectum other than haemorrhoids. All the patients of both sexes between fourteen years to eighty years of age, belonging to different socioeconomic setups were included in the study. Patients with co-morbid factors like severe anaemia, uncontrolled angina, paraplegia or diabetes mellitus, under experts care in the hospital, were also included.

Patients with complications of haemorrhoid, like complete prolapse, gangrene and thrombosis. Haemorrhoids associated with fissure, fistula or any other pathology were excluded from the study. Those with external skin tags were selectively treated as many of them believed their symptoms were due to the external tags. Patients who opted to continue with the skin tags were treated with ligation and others were offered haemoerrhoidectomy.

A room in the outpatient department with a bed, mechanical sucker and portable light source was specified for the purpose. After explaining the whole procedure, injectable analgesic was given intramuscularly. Three ligature carri-

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ers were loaded with the rubber bands and kept ready with a plan to ligate all the three haemorrhoids in one sitting. With the patient in left lateral position, per rectal examination with adequate local anaesthetic and lubrication was done (Fig-I). Well-lubricated proctoscope with

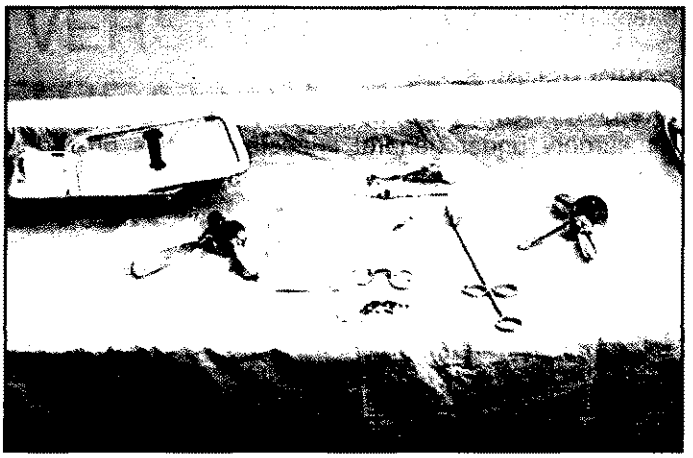

Figure I: *Set of instrument used during the procedure*

water based lignocaine jelly was introduced. In patients where bases of the haemorrhoids were seen involving the whole circumference of the rectal lumen, selective ligation was done. In case the bases were relatively narrow and seen as having small stalks were ligated in the same sitting[3]. The procedure was repeated after an interval of a month in "selective ligation cases". We also ligated two haemorrhoids in the 1st sitting and ligated the third in another sitting. During the procedure small amount of bleeding due to the handling of the haemorrhoids was common, which was sucked away with a mechanical sucker. A gauze swab soaked in 4% lignocaine was left at the anal verge while removing the proctoscope. Patients were advised to remain recumbent for 15 to 20 minutes. After removal of the swab patients were sent home with advise to take tablet Diclofenic sodium 50 mg in case of pain or discomfort. They were also advised to avoid strenuous straining while defecating. Patients were called after a fortnight and were examined under analgesic cover in out patient department. Small size ulcers were seen at the ligation sites in all patients. They were then advised to visit at monthly intervals for a year.

A room with a desk and one post graduate trainee doctor under supervision was reserved in the out patient department to follow these patients at monthly intervals. After 12 months specially designed simple questionnaires with self addressed envelopes were sent to follow up these patients upto 3 to 5 years at yearly intervals. On the basis of this proforma, three outcome variables of this therapy were judged. The response was quite satisfactory.

RESULTS

The group for elastic band ligation comprised of 500 patients with male to female ratio of 27:1. Duration of bleeding per rectum ranged from few months to almost sixteen years. Fifty patients could not be followed up after a few visits, as some were already under care of physicians and were sent home or otherwise, some had come from other parts of the country. Most of them complained of pain of varying degrees, described as sense of discomfort, heaviness and inability to go for work for one to two days. All the patients complained of bleeding per rectum. The quantity of blood lost during these episodes was described as few drops to few millilitres while passing stools on few occasions. Seven patients with severe pain were unable to resume work. They required injectable analgesics. One patient failing to respond within few hours of injections reported back in the emergency department with severe pain and was admitted in hospital. After admission to the hospital, examination under general anesthesia was carried out, where the elastic rubber bands were found very low, resulting in ulceration and inflammation below the dentate line in the sensitive area of the anus. Patient responded to antibiotic therapy. He was one of the first few patients, the procedure was however repeated after healing of the ulcers. "Vasovagal shock" like condition was noticed in 4 patients (0.88%). Incontinence, anal narrowing, soiling of clothes, urinary retention or other complications were not noticed or reported in the followup (Table-I).

TABLE-I

Complication	No of Patients	%
Severe pain (requiring analgesics injections)	7	1.5
"Vasovagal shock".	4	0.88
Repeat ligation.	12	2.6
Recurrence requiring open haemorrhoidectomy	5	1.1

With reassurance and oral analgesic patients resumed routine work. In one patient requiring admission to the hospital rectal digital examination and proctoscopy under general anaesthesia revealed small ulcers and severe proctitis. With intravenous metronidozole, sufficient analgesia and removal of the bands, patient recovered satisfactory. The procedure of ligation was repeated after a month.

Vasovagal shock like symptoms responded well with immediate recognition and treatment of the condition. Twelve (2.6%) patients reported recurrence of bleeding after an interval of one to two years. Five patients, including a family physician, had transitory improvement of symptoms after the 2nd ligation. They required open haemorrhoidectomy under general anaesthesia later.

DISCUSSION

Pain of varying intensity was a common post-procedural phenomenon in our patients, though severe pain requiring analgesic injections or causing actual dropout from work was recorded in only a few patients. Quevedo-Bonilla G. et al[4] have described septic complications and death of a patient. They found pain and urinary dysfunction heralding the septic complications after band ligation of haemorrhoids. No major bleeding was recorded in our patients. Few millilitres blood loss was due to sloughing away of the haemorrhoidal tissue or due to handling of the soft mucous layer of the rectum during the procedure. Oueidet & Jurjus[5] have described a patient in their study with severe bleeding, requiring hospital admission and blood transfusion. They have also described post procedural pain in 13.5% patients. Their long-term results were good in 81.2% cases.

The "vasovagal shock" like picture was quite disturbing for us, however now we asked the patients to remain on the couch for fifteen minutes after the procedure. We consider that vasovagal condition resulted due to rapid postural change after the procedure. This simple precaution, followed strictly, prevented the condition.

A comparative study of the non-surgical methods of treating haemorrhoids with followup of upto 12 months has been described by Johnson and he concluded that the results were the same irrespective of the method used[6]. Mean followup of 60 months' results in evaluation of rubber band ligation has been undertaken by Wrobleski and others[7]. Their 80% patients had improved. In yet another study the improvement results been reported 90.6% with varying degree of pain in 28.7% with ligation of three primary haemorrhoids in a single out patient session[8]. An average followup of 5.6 years with cure of two thirds of patients at the end of five years and in more than 50% patients at the end of ten years has also been reported[9].

Alemdaroglu and Ulualp KM[10] have found long term results satisfactory in 93.3% patients. They have concluded that a single session is a valuable alternate to haemorrohoidectomy in selected patients. Poon et al[3] have performed triple rubber band ligation in a single session and compared the procedure with ligation of one primary haemorrhoid and; have recommended the former over latter. With careful selection of patients without complications and decision for triple band ligation in one session, our good results were 96.3%. Relapse occurred in seventeen patients, twelve requiring repeat ligation and five haemorrhoidectomy.

CONCLUSION

In a busy hospital, with large number of patients waiting for surgery under general anaesthesia, this procedure offers a good alternative and patients get cured in a single session in an outdoor setup. Patients, otherwise unsuitable and high anaesthetic risk, can be offered this therapy. Complications of open haemorrhoidectomy are not seen in this procedure.

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A COMPARATIVE STUDY OF THE EFFICACY AND COST-EFFECTIVENESS OF OCCLUSIVE VERSUS CONVENTIONAL DRESSING IN THE TREATMENT OF OPEN WOUNDS AND ULCERS

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ABSTRACT:

The choice of wound dressing was limited until recently and dressing application, decided empirically and often left to the most junior member of the team. Many wound dressings are now available and others are under development.

A study was carried out on 60 patients at Surgical Unit-I, Rawalpindi General Hospital, Rawalpindi, from January 1996 to April 1997. Patients were divided into two groups and treated with pyodine gauze or hydrocolloid type of dressing. Twentythree (76.7%) were males and 7 (23.3%) were females in the pyodine gauze dressing group and 20 (66.7%) were males and 10 (33.3%) were female in the hydrocolloid dressing group. The major causes of the wounds in our study were road traffic accidents (50% hydrocolloid group, 60% Pyodine gauze group) incision and drainage of abscesses (23% hydrocolloid group, 27% pyodine gauze group) and post-operative appendicectomy wounds, intentionally left unstitched.

Twentyfour patients (80%) in the pyodine gauze group and 25 patients (83.3%) in the hydrocolloid group completely healed and 3 patients in each group required secondary suturing. Skin grafting was done in 3(10%) patients in the pyodine gauze group and 2(6.7%) patients in the hydrocolloid group. Wound infection occurred in 4 patients(13.3%) in pyodine gauze group and one patient (3.3%) in hydrocolloid group. Incidence of positive growth with no clinical evidence of infection occurred in 6 patients (20%) in pyodine gauze group compared to one patient (3.3%) in hydrocolloid group.

In the hydrocolloid group, 27 patients (90%) experienced marked reduction in pain compared with none in the pyodine group. Removal of dressing was easy in all the 30 (100%) patients in the hydrocolloid group compared with only 6 (20%) patients in the pyodine gauze group. Also removal of dressing was painless in all the patients in the hydrocolloid group, compared with painful dressing removal in 27 (90%) patients in the pyodine gauze group. Necrotic tissue in wound was softened in 24 (89%) patients in the hydrocolloid group compared with 2 (6.7%) patients in the pyodine gauze group. No exudate was found in wounds in 21 (70%) patients in the hydrocolloid group compared with 6 (20%) patients in the pyodine gauze group.

The appearance of granulation tissue was good in 27 (90%) patients in the hydrocolloid group compared with 18 (60%) patients in the pyodine gauze group. The total number of dressings required to heal a wound completely ranged from 2 to 8 dressings for the hydrocolloid type (average 4.4 dressings), compared with the pyodine gauze requiring 7 to 29 dressings to heal a wound (average 16.1 dressings). Total days to heal a wound under hydrocolloid dressing ranged from 14 to 49 days (average 26.7 days), compared with 11 to 74 days for pyodine gauze group (average 29.1 days). Frequency of change of dressing was 4 to 7 days for hydrocolloid (average 6.14 days), compared with 1 to 3 days for pyodine gauze (average 1.84 days).

KEY WORDS: Wound Dressings, Occlusive, Conventional.

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INTRODUCTION

The inherent tendency to heal is so marked that its study is often neglected[1,2]. In healthy individuals tissue repair after acute injury is thought to occur at a maximum rate and is not really impaired unless adversely affected by local or systemic conditions[3]. However an augmentation in the healing rate of chronic wounds would not only be beneficial to the patients but also to health care budgets. An example where basic research has been utilized clinically is that of maintaining a moist environment under occlusive dressings to enhance healing. An increase in healing under moist condition compared with the wounds left exposed to air was demonstrated in animals in 1962 by Winter[4] and a year later in humans by Hinman[5].

PURPOSE OF STUDY

The purpose of study was to evaluate the efficacy and cost-effectiveness of two types of dressing materials, an occlusive (hydrocolloid) and a conventional (pyodine gauze) in the treatment of open wounds and ulcers.

MATERIAL AND METHODS

This study of 60 patients was carried out at Surgical Unit-I, Rawalpindi General Hospital, Rawalpindi, from January 1996 to April 1997. Patients were treated with either type of dressing, pyodine gauze or hydrocolloid type, in O.P.D. and indoors. The dressings were performed by the same dressing staff and record of wound size on transparent paper were kept. Assessment of progress of healing was done periodically by one of the consultants. All the patients were evaluated by history and clinical examination. Relevant investigations, were carried out at the Pathology Laboratory of Rawalpindi General Hospital.

This was a prospective, open, randomized, parallel group study. Sixty patients, 30 in each group selected randomly, of either sex between 18 and 55 years of age, with open wounds and ulcers (Grades I & II of Shea's Classification of ulcers) were included in the study. Diabetics, burns, elderly (> 55 years), patients with peripheral arterial occlusive disease, clinical evidence of infection with diminished immune reserve, on immunosuppressive drugs, with wounds on the external genitalia or around the anus and requiring drainage were excluded.

Clinical data of the patients was recorded on a proforma. On examination of the wound, initially and at subsequent dressing changes, following were noted: size, shape and area recorded on transparent tracing paper, initially and on each subsequent dressing change at 5-7 days intervals for both the dressing groups. The wound tracings were later photocopied on millimetre graph paper and the area in each of the tracing counted manually.

Depth of the wound / ulcer: Shea's classification for pressure ulcer was used (Shannon and Miller)[6].

- **Grade-I** A moist superficial, irregular ulceration limited to the epidermis exposing the underlying dermis and resembling an abrasion.
- **Grade-II** The ulceration extends through the full thickness of the dermis to the junction with the subcutaneous fat.
- **Grade-III** Ulceration progresses into the subcutaneous fat where extensive and rapid undermining occurs.
- **Grade-IV** Ulcer penetrates the deep fascia causing extensive soft tissue spread with osteomyelitis and septic dislocated joints. Bone can be identified in the base of the ulceration and there is profuse drainage and necrosis.

Only Grade I and II wounds / ulcers were included in the study.

Local draining lymph nodes were examined. Any discharge, slough or smell were noted. The following points regarding effects of dressing were observed and recorded: reason for dressing change, ease of removal of dressing, pain while dressing in situ, ability of the patient to take bath / shower, time spent on each dressing change and the material used. Nutritional status of every patient was assessed as the baseline and then on the 10th and 20th day by measuring body weight, total leukocyte count and serum albumin levels.

Wound swab for culture and sensitivity examination was taken at the 10th day dressing change and if pathogenic organisms were revealed with clinical signs and symptoms of infection, such as pain at wound site, fever or spreading cellulitis then appropriate antibiotic was given for 5-7 days or the wound was desloughed or debrided surgically.

Patients who satisfied the inclusion criteria and signed the informed written consent were included in the study and given tetanus prophylaxis. They were randomly allocated to either hydrocolloid or pyodine gauze group. Pyodine soaked gauze dressing was changed every 1-3 days and the hydrocolloid dressing changed every 5-7 days. The hydrocolloid dressing was changed earlier if there was heavy exudate. The wound was cleansed with normal saline and the surrounding skin dried thoroughly. An appropriate sized hydrocolloid wafer (Duo Derm, C.G.F.) dressing by Convotac Squibb Pharma Labs, was selected for each individual wound, large enough to cover a margin of 2.cm. of intact skin around the wound. The pyodine (0.75 w/v, Brookes Pharm. Labs, Pak.) soaked gauze was fluffed and loosely applied to cover the wound. One or two sterile dry gauzes were then applied and topped with a secondary dressing to maintain the moistness of the inner dressing. The dressings were secured with Paragon adhesive tape.

The efficacy of the two methods of managing wounds and ulcers was evaluated by a decrease in wound size and area and by total wound healing. Clinically a wound was declared healed when completely covered with epithelial tissue[7]. The size of the wound was determined by the method mentioned earlier. This method has an error rate of 3.9%. Wound areas were used to determine the rate of wound healing by calculating the wound area growing smaller and the percent wound contraction was calculated from these wound areas as under:-

$$\text{Percent contraction} = \frac{100 \times (\text{original area} - \text{later area})}{\text{original area}}$$

The calculations of cost-effectiveness of each dressing included the acquisition cost of the dressing, cost of ancillary supplies e.g. normal saline, sterile gauze, labour incurred in the use of dressings, total number of dressings and days to heal a wound were recorded on a supply usage proforma for each dressing method. An objective enumeration of the total costs (labour and supplies) associated with treatment method was done and the average cost per dressing calculated when the wound had healed or any surgical intervention, e.g, secondary suturing or partial thickness skin grafting done.

All the patients were asked regarding reduction in pain in wound after the application of dressing and also for any problem later on while the dressing remained on the wound, such as pain, itching or redness. They were also asked about the ease with which the dressing was removed and whether this was painful or not. The pain was graded as: Nil as no pain, moderate as bearable, servere as unbearable. The reduction in pain after application of the dressing was graded as Nil (no reduction in pain) moderate (reduction of pain to bearable levels) and marked (no pain felt after the application of dressing).

RESULTS

The age of the patients ranged from 18-54 years. Mean age for pyodine gauze group was 29 years and hydrocolloid group 34 years. Twentythree (76.7%) patients were males and 7 (23.3%) females in the pyodine gauze group, while 20 (66.7%) patients were male and 10 (33.3%) female in the hydrocolloid group. Ten males were smokers (5 in each group). The nutritional status of all the patients in the study was good and no patient was suffering from nutritional deficiency.

Sixteen patients (53.3%) with Grade I and 14 (46.7%) with Grade II were in the pyodine gauze group and 12 patients (40%) with Grade I and 18 (60%) with Grade II were in the hydrocolloid group.

Twentyfour patients (80%) in the pyodine gauze group and 25 patients (83.3%) in the hydrocolloid group completely healed. Three patients in each group required secondary suturing of the wound when granulation tissue in the wound was good. Skin grafting was done in 3 (10%) patients in the pyodine gauze group and two (6.7%) patients in the hydrocolloid group Wound infection occurred in 4 patients (13.3%) in pyodine gauze group compared with one patient (3.3%) in hydrocolloid group. In all patients with wound infection, the clinical signs and symptoms subsided on antibiotics for 5 days given according to the culture report, making no change in dressing type or frequency.

Twentyseven patients (90%) in the hydrocolloid group experienced marked reduction in pain compared with none (0%) in the pyodine group. All the 30 patients (100%) felt no reduction in pain in the pyodine gauze group compared with one patient (3.3%) in the hydrocolloid group. Likewise, 8 patients (26.7%) in the pyodine gauze group felt pain while dressing in situ and 3 patients (10%) felt itching in the wound in the pyodine gauze group compared with no such complaints in the hydrocolloid group. There was no redness around the dressing site in either group.

Removal of dressing was easy and painless in all the 30 (100%) patients in the hydrocolloid group compared with only 6 (20%) patients in the pyodine gauze group. Difficult removal of dressing required soaking with normal saline in 24 (80%) patients in the pyodine gauze group. Dressing removal was painful in 27 (90%) with itching in 3 (10%) patients in the pyodine gauze group.

Necrotic tissue in wound was soft in 24 (89%) patients in the hydrocolloid group compared with 2 (6.7%) patients in the pyodine gauze group. No exudate was found in wounds in 21 (70%) patients in the hydrocolloid group compared with 6 (20%) patients in the pyodine gauze group. The amount of exudate was defined as none if no exudate, clean wound, slight if < 5.cc exudate and moderate if > 5.cc exudate.

The appearance of granulation tissue was good in 27 (90%) patients in the hydrocolloid group compared with 18 (60%) patients in the pyodine gauze group. The total number of dressings required to heal a wound completely were as in (Table-I).

TABLE-I TOTAL NUMBER OF DRESSING REQUIRED TO HEAL A WOUND

Dressing Type	Mean	Range
Duo-DERM	4.4	2-8
PYODINE GAUZE	16.1	7-29

The cost calculated was nursing @ Rs. 1.12 per day and material cost Rs.26.93 per day for hydrocolloid group compared with Rs. 6.99 per day and Rs. 20.53 per day respectively for pyodine gauze group. Total cost was Rs. 28.05 per day for hydrocolloid group and Rs. 27.52 per day for pyodine gauze group.

The decrease in wound area of 3.94% per day for hydrocolloid group and 3.01% per day for pyodine gauze group was observed. A healing rate of 73.5 mm per day was observed in hydrocolloid treated wounds compared with 54.44 mm per day for pyodine gauze treated wounds in this study. The mean percent change in wound size from initial size as measured at day 7, 14 and 21 was higher for hydrocolloid treated wounds in this study reaching 92 % at day 21 compared with 76% in pyodine gauze treated wounds. (Fig I)

Figure I: *Comparison of donor site for skin grafting*
Right leg treated with duoderm (Hydrocolloid dressing) (Wound completely healed)
Left leg treated with Pyodine Guaze dressing.

In this study, average time per dressing change was 6.5 minutes for hydrocolloid type and 7.2 minutes for pyodine gauze. Infection rate was 3 % in hydrocolloid type dressing and 13.3 % in the pyodine gauze group.

DISCUSSION

The current health care environment promotes short hospital stay and encourages cost control. Therefore it is essential for a treatment to be both efficacious and cost-effective. No known study in Pakistan has so far evaluated the efficacy and cost-effectiveness of different methods of managing wounds and ulcers.

Wound healing in this study was evaluated by calculating the total surface area of wounds. However, this measure is only two-dimensional and lacks information about changes in wound surface, as demonstrated by the presence of granulation tissue and absence of devitalized tissue, which are not captured by wound tracings and are clinical indicators that healing is taking place[8]. Thus wound healing may have occurred, but escaped quantification because of the measurements used in this study.

Successful healing of open wounds and ulcers depend on moisture, minimal contamination, exudate, necrotic tissue and protection from external irritants. The moist wound micro environment under the occlusive dressings reduces trauma to delicate healing tissue during dressing changes and thus promotes healing. The mean percent change in wound size from initial size as measured at day 7, 14, and 21 was higher for hydrocolloid treated wounds in this study reaching 92 % at day 21 compared with 76% in pyodine gauze treated wounds. Cherry and Ryan[9] reported a mean percent change of 88 % from initial wound size in hydrocolloid treated wounds compared with 84 % in control wounds.

The healed epidermis in the hydrocolloid dressing treated wounds had an exceptionally homogenous quality, was uniformly smooth and non-desquamating, and all this differed from the pyodine gauze treated wounds where removal of the dressing resulted in small ulcerations requiring repeated washing and soaking of dressing with normal saline and thus the resulting epithelium was not smooth and homogenous.

The hydrocolloid dressings are bacteria proof from within as well as from without, thus contributing to wound protection, while the bacterial filtering property of cotton wool /gauze are lost once the dressing becomes damp, and exudate from wounds covered with gauze rapidly strikes through[10]. This results in infection of the wound and the spread of organisms to other patients, as is evidenced by the rate of infection under two types of dressing material. Recently, this low infection rate under occlusion has been ascribed to the hydrogen peroxide generating capacity of hydrocolloids and its constituents (sodium carboxy-methyl

cellulose, gelatin and pectin, especially the latter two)[11]. The release of low levels of hydrogen peroxide into the wound environment could conceivably contribute both to the inflammatory phase and to the fibroblast proliferation, and hence to the granulation phase of wound healing[12]. Hutchinson. reports an overall wound infection rate of 2.6 % under occlusive dressing compared with 7.1 % under conventional gauze dressing. The infection rate was 3 % under hydrocolloid type dressing in this study compared with 13.3 % in the pyodine gauze group[13]. More than twice as many clinical infections are reported under conventional dressings, including those impregnated with antimicrobials, than under occlusive dressings[14]. While antiseptics including povidone-iodine, hydrogen peroxide and 0.25% acetic acid in concentrations commercially available have been shown to be harmful to the delicate tissues within the healing wound[15], they do not contribute to lowering of incidence of wound infection. If wound irrigation is required, physiologic saline is preferred. Also in this regard, saline wet-gauze is preferred to any antiseptic wet-gauze if the wound cannot be dressed occlusively.

Both the hydrocolloid and moist gauze type dressings fulfill the criteria for successful treatment of open wounds and ulcers, but efficacy and cost-effectiveness of different types of wound management vary. Historically, hydrocolloids have been considered an expensive method of managing wounds and ulcers, but this is not consistent with findings of many studies evaluating the cost-effectiveness of different types of dressings with hydrocolloids. The inherent tendency to heal an acute wound is so marked in normal individuals that its study is often neglected, therefore most of the studies conducted include efficacy and cost-effective analysis of different types of dressings in chronic ulcers and especially, chronic leg ulcers and pressure sores, in whom the patient's general health, nutritional parameters, state of tissue perfusion, mobility and continence regarding urine and faeces is already disturbed. In such studies, although the cost of a single application of hydrocolloid dressing far exceeds the cost of a single moist gauze dressing, the cost for the entire period of treatment is considerably less than the cost of moist gauze dressing regarding material and labour costs, and also the quality of healing is improved with reduced rates of wound infection, reduced pain and increased mobility that are beneficial to the patient.

In this study, a hydrocolloid dressing, is compared with pyodine gauze dressing, a conventional gauze dressing. It was found that the hydrocolloid dressing was more efficacious in terms of rapid and complete healing, reduction in infection rate, less time required for dressing change, less number of dressings required to heal a wound, reduction in perceived pain thus less need of analgesics and patient's comfort in daily life with dressing in situ. Although the dressing was found to be cost effective as well regarding it's beneficial effects in healing and patient's comfort, the cost -effectiveness did not reach statistical significance in this study (Chi square test = 2.88, p = 0.30), because of very low nursing and health care cost in Pakistan. However, seeing the very minimal difference (only 0.53.Rs per day) in cost between a hydrocolloid dressing and a conventional dressing, it is recommended that occlusive dressing may be used where better healing and patient's comfort regarding job and daily activity and the avoidance of complications like infection are the aims.

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RECURRENCE OF CARCINOMA OESOPHAGUS AFTER TRANSHIATAL OESOPHAGECTOMY – A TEN YEAR EXPERIENCE (1989 – 98)

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ABSTRACT:
Though higher percentage of carcinoma oesophagus after transhiatal oesphagectomy has potentially high cure rate, we have a different experience; in a series of 30 patients over a period of ten years, with recurrence of carcinoma in 10 patients (33.3%) after transhiatal oesophagectomy. Operative procedure, histopathological findings, recurrence of symptoms, investigative findings and treatment are described.

KEY WORDS: Oesophagus, Carcinoma, Transhiatal Oesophagectomy, Recurrence.

INTRODUCTION

Transhiatal oesophagectomy is a safe and well tolerated method of treatment for carcinoma oesophagus. It is an accepted approach for carcinoma as well as benign obstructive conditions of the oesophagus[2]. Avoidance of thoracotomy, adequate longitudinal clearance, cervical anastomosis and short operating time are its main advantages. The. major drawbacks are the limited en-bloc resection, blind procedure, narrowing around the carina and an increased risk of injury to the nearby structures like thoracic duct, azygous vein, trachea and recurrent laryngeal nerves[3]. The risk factors, which for primary carcinoma oesophagus and recurrence, are heavy alcohol consumption, excessive use of tobacco, malnutrition, deficiency of metals like zinc, molybedenium, magnesium and iron in certain endemic areas and chronic oesophageal irritation3. Certain genetic factors lead to poor prognosis, like overexpression of cyclin D1, deletion of P16 and P15 genes[4].

MATERIAL AND METHODS

This prospective study was carried out at Surgical Unit-II, Sandeman Provincial Teaching Hospital, Quetta, Pakistan from Aug. 1988 to Aug. 1998. It is the only tertiary care hospital of the province and besides, it is a referral centre for neighbouring countries like Afghanistan and border areas of Iran. All cases of dysphagia with carcinoma oesophagus were worked up with detailed history, complete general physical examination, routine investigations, barium oesophagogram, oesophagogastroscopy and biopsy from suspected lesions for histopathological examination. Ultrasonography of liver, bone and liver isotope scanning were performed. After establishing the site, nature, extent, cardiopulmonary and hepatorenal status; 30 patients out of 70 were selected for transhiatal oesophagectomy. Complete operative procedure record, histopathological examination reports and follow-up record were collected.

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RESULTS

Thirty patients between 35 – 65 years of age were selected for transhiatal oesophagectomy. The youngest was a 38 years old female, while the eldest was a 65 year old man. Male to female ratio was 2.7:1. Majority of the patients were in the 6th decade of life.

The main presenting complaints were dysphagia, weight loss and vomiting. History and examination revealed that the majority (85%) belonged to Afghanistan, while the remaining (15%) were locals. Eight (26.4%) patients had dysphagia for less than 3 months. Oesophagogram and oesophagoscopy revealed 28 (93.4%) patients had carci-

noma of oesophagus in the lower one third and 2 (6.6%) in the middle one third of the oesophagus.

Histopathological results showed that 26 (86.6%) patients had squamous cell carcinoma while 4 (13.2%) had adenocarcinoma. Postoperative complications are given in (Table-I).All the patients were followed up 5 died within

TABLE-I POSTOPERATIVE COMPLICATIONS AFTER TRANSHIATAL OESOPHAGECTOMY

Complications	No. of Patients	%
Fever	23	75.9
Wound infection	10	33.0
Haemothorax	8	26.4
Anastomotic leakage	4	12.3
Pulmonary embolism	2	6.6
Aspiration pneumonia	2	6.6

seven days of operation while 3 patients died within a month. The overall mortality was 26.4%.

Of the remaining 22 patients 10 came with complaint of dysphagia within six months. Oesophagoscopy showed obstructive lesions and biopsies revealed squamous cell carcinoma. The recurrence rate was 33.34%. All the patients were referred for radiotherapy.

DISCUSSION

Oesophageal carcinoma is a lethal malignancy in our society with high incidence of mortality and morbidity. Early detection, proper staging of tumours and complete evaluation before surgical management are mandatory. High recurrence rate after transhiatal oesophagectomy should be considered before surgical procedures are undertaken. Lugol enhanced oesophagoscopy to detect early synchronous lesion, AgNOR (Argyrophilic nucleolar organiser region) counting, detecting and estimation of some genetic factors like cyclin D1, P15, and P16 genes and expression of P53 and chronic oesophagitis evaluation may help in early detection of oesophageal carcinoma, perhaps leading to a better prognosis.

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USE OF HIGH ENERGY EXTRA CORPOREAL SHOCK WAVE THERAPY IN TREATMENT OF PSEUDO ARTHROSIS, TENDINOSIS CALCAREA OF THE SHOULDER AND INSERTION TENDINOSIS

SAQIB AMIN

ABSTRACT:
A retrospective study was carried out on 30 patients with pseudoarthrosis and 41 patients with tendinosis calcarea and insertion tendenopathy. The results were evaluated and patients were regularly followed after Extra Corporeal Shock Wave Therapy (ESWT). The followup period was from 3 months to a year. In 70% of pseudoarthrosis cases, consolidation was found on x-ray examination. In 72% of patients, who had received treatment for soft tissues, clinical improvement was noticed.

KEY WORDS: Shock wave therapy, Pseudoarthrosis, Tendinosis calcarea, ESWT

INTRODUCTION

Shock wave therapy has recently been used increasingly in the treatment of orthopaedic and traumatology syndrome[1]. We have carried out shock-wave treatment in out-patients using an apparatus for this application. It has been found advantageous in the treatment of pseudoarthrosis which can normally be cured only with complicated surgical intervention. The non-invasive method, ESWT represents a possible alternative treatment to surgical intervention for those cases in which conservative therapy has been tried without success.[2]

MATERIAL AND METHODS

In retrospective examination 30 patients with pseudoarthrosis, 29 patients with tendinosis calcarea, 10 patients with epicondylitis radialis and one patient with complaints of pain at the insertion of Achilles tendon were evaluated.

All patients with pseudoarthrosis in the region of long tubular bones had previously been treated several times osteosynthetically and partially also with spongioplasty. All patients had a new revision / spongioplasty operation. Pseudoarthrosis cases which had not been stabilized osteosynthetically were immobilized as far as possible with braces and casts after the treatment. Two pseudoarthrosis cases in the pelvic region were made functional by providing lower arm crutches. The mean duration of soft tissue disease was 39 months; pain had been experienced both at rest and following exercise.

All the patients had various forms of treatment in the preceeding years (Table-I) before coming for ESWT.

TABLE-I TREATMENT BEFORE SHOCK WAVE THERAPY

Tendinosis calcarea	Infiltration	29
	Physiotherapy	29
	X-ray stimulation treatment	6
	Cure treatment	3
	Mobilisation under anaesthesia	1
Other insertion tendinopathies	Infiltration	12
	Physiotherapy	12
	Plaster case immobilisation	8

The symptom problems were evaluated with the aid of questionnaire, according to subjective criteria (visual analogue scale), with regards to feeling of pain, activity of daily life and ability to work or sports. Treatment was carried out with "Ossa Tron Device", an apparatus designed and approved for treatment of bones and soft tissues[3].

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Ossa Tron consists of three main functional groups. The main group is the shock wave generating system. This includes the shock wave generator with electrode. A high-energy water shock wave is produced by means of an under water spark. The shock wave is passed into the body via a water line, in the form of a water cushion, which is in contact with the skin surface of the patient. For coupling the shock wave energy, the water cushion can be filled up to skin contact. The second component group is the positioning unit. Adjustment of the direction of irradiation and super imposition of the focal point on the volume to be treated takes place electromotively. Rotation of the therapy head has the particular advantage of enabling treatment of different regions of human body to be carried out from different directions. This is particularly important in the treatment of anaesthetised patients in order to avoid changing of positions. The third functional group is the aiming device. The volume to be treated is localised with the aid of an X-ray C-arc. The therapy head is positioned by the motor driven adjustment in such a way that marks are made to coincide with the volume to be treated in x-ray projections. After rotating the two target marks through a suitable angle and swivelling the x-ray beam path, the target marks are once again made to coincide with the volume to be treated.

The impulse energy is variable and is adjusted via the electrode voltage. The energy density at the focal point is 0.08 mJ/mm² at 28 KV. The total energy is 50 mJ at 28 KV. For pseudoarthrosis a single treatment with 3000 impulses at 28 KV, was generally applied under general or local anaesthesia. Coupling was carried out by means of an integrated plastic diaphragm. The penetration depth was 0-100mm. Location was made with the aid of an x-ray C-arc. Treatment frequency of patients with soft tissue disease was 2 or more treatments only in 30% of cases.

RESULTS

In 2 patients of pseudoarthrosis consolidation was shown on radiological examination, which was achieved after a single treatment (Table-II).

TABLE-II TREATMENT RESULT FOR PSEUDOARTHROSIS

Localisation	Total	Completely Healed	Not Healed
Lower leg	17	12	5
Metatarsus	05	05	0
Upper arm	03	02	1
Lower arm	02	01	1
Pelvis	02	01	1

In 79% patients with tendinosis calcarea, freedom from pain or significant improvement were achieved after treatment. In epicondylitis patients 70% were free of pain or there was considerable improvement in symptoms (Table-III).

TABLE-III RESULT OF SOFT TISSUE TREATMENT

	Tendinosis C	Epicondylitis	Achilles Tendon	Total
Pain free	14 (48%)	5 (50%)	2 (100%)	21 (51%)
considerable Improvement	10 (34%)	2 (20%)	0	12 (28%)
Little improvement	02 (07%)	0	0	02 (07%)
Unchanged	03 (11%)	3 (30%)	0	06 (14%)
Total	**29**	**10**	**2**	**41**

Seventy percent of patients who were unfit for work became fit after the treatment. Ability to carry on sports were achieved in 73% of patients who had previously been unable to do so. The only complications were intra cutaneous haematomas. All patients found the treatment painful inspite of local anaesthesia. Nevertheless 95% of patients were prepared to go through the treatment again in the same situation.

DISCUSSION

Our results agree with previously published ones, both for pseudearthrosis, and soft tissue therapy. The energy used for soft tissue treatment is now significantly higher than that used previously for this reason the therapy is carried out under anaesthesia. The advantage of this treatment is that only one to maximum three treatments are necessary, whereas with low energy methods, three to thirty treatments had to be carried out.

Despite different therapy conditions, with regards to energy and the number of treatments as well as different interpretations of mode of action of the shock waves on soft tissue nearer the bone, an interesting therapy possibility seems to be emerging here[4]. Owing to high cost, the application has so far been limited to therapy resistant cases with the exception of pseudoarthrosis cases.

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A STUDY OF COLORECTAL CARCINOMA

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ABSTRACT:
A total of 105 cases of colorectal carcinoma were studied over a period of five years from January 1993 to December 1997 at the histopathology section of Department of Pathology, Chandka Medical College (CMC), Larkana. Male to female ratio in the study was 2.08:1. Patientís ages ranged from 12 to 75 years, with mean age 44.63 years, which was higher in females (46.32 years) than in the males (43.83 years). Most of the patients were in the 3rd to 5th decades of their lives (70.5%) with peak age in the 5th decade (26.7%). More than 40% of patients were less than 40 years of age, including 04 (3.8%) teenagers, all males. Most of the tumours were located in the rectum, caecum and sigmoid colon in descending order of frequency. Left colon was more commonly involved than the right with male to female ratio higher in the former than in the latter. The most common histological type of carcinoma was adenocarcinoma diagnosed in 87 (82.87%), followed by mucinous variant in 15 (14.28%). The most common presenting complaints were abdominal pain and bleeding per rectum. History of haemorrhoids was present in 07 (6.66%) and inguinal lymphadenopathy in 15 (14.28%). Colorectal carcinoma in our study was, in many respects, similar to that reported from other parts of the country and abroad, though, our patients were much younger than their western counterparts.

KEY WORDS: Colorectal carcinoma, pattern.

INTRODUCTION

Colorectal cancer is the commonest gastrointestinal malignancy throughout the western world. In the UK mortality associated with this cancer is approximately 20,000 per year, making it the second most common cause of death from a malignant disease[1,3]. In the United States cancer of colon remains as an epidemic with both sexes and all ethnic groups are at equal risk[4]. Although colorectal cancer is predominantly a disease of western society, it is not rare in Pakistan and other developing countries, possibly as a result of industrialization and gradual westernization of diet.

PURPOSE OF STUDY

This study was undertaken at C.M.C., Larkana to evaluate the pattern of colorectal carcinoma in upper Sindh with special reference to age, sex, anatomical sites and clinical presentation.

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MATERIAL AND METHODS

This is a prospective study, consisting of all cases of colorectal cancer received in the histopathology section of the Department of Pathology, CMC Larkana, from January 1993 to December 1997. The tissues were fixed in 10% formalin and paraffin embedded blocks were processed in a routine way for preparation of haematoxylin and eosin (H & E) stained sections. The histological diagnoses were made under light microscopic examination according to the criteria given in the Text Book of Pathology[6]. Clinical details were noted from the biopsy request forms and the hospital records of the patients. Cases were analyzed according to age, sex, and anatomical site of tumor, histological diagnosis and clinical presentation.

RESULTS

A total of 105 cases of carcinoma and 06 cases of colorectal lymphoma were studied during the stipulated period. All cases of lymphoma were of non-Hodgkinís variant and all the six patients were males with an average age of 45.83 years. The lymphoma cases were not included in the study. Of the 105 cases of colorectal carcinoma, 71 (67.62%) were males and 34(32.38%) females with male to female ratio 2.08:1. Ages of patients ranged from 12 to 75 years with an average of 44.63 years, which was higher in females (46.32 years) than males (43.83 years). Majority of patients were in the third to fifth decades of their lives (70.5%) with peak age in the fifth decade (26.7%), 43.8% of patients were below the age of 40 years including 04 male teenagers, youngest being a 12 year old boy (Table-I).

TABLE-I DISTRIBUTION OF CARCINOMA PATIENTS ACCORDING TO AGE GROUPS (YEARS)

Sex	11-20	21-30	31-40	41-50	51-60	61-70	70+	No. (%)
Male	**04**	**12**	**17**	**17**	**14**	**06**	**01**	**71(67.62)**
Female	**–**	**05**	**08**	**11**	**07**	**02**	**01**	**34(32.38)**
No	**04**	**17**	**25**	**28**	**21**	**08**	**02**	**105**
(%)	**3.80**	**6.19**	**23.80**	**26.70**	**20.00**	**7.61**	**1.90**	**100**

Distribution of carcinoma patients according to age groups (years).

The most common site was rectum involved in 43 (40.99%) cases followed by caecum and sigmoid colon in 29 (27.61%) and 15 (14.28) cases respectively. Left colon was involved more commonly (65) than the right (40) with male to female ratio higher in the former (3.42:1) than in the latter (1.66:1) (Table-II).

TABLE-II DISTRIBUTION OF COLORECTAL CARCINOMA

Site	Male	Female	No	%
Left Colon (65 cases)				
Rectum	29	14	43	40.99
Sigmoid colon	10	05	15	14.28
Descending colon	06	--	06	5.71
Left Flexure	01	--	01	0.95
Right Colon (40 cases)				
Caecum	18	11	29	27.61
Ascending colon	04	01	05	4.76
Right colon	03	01	04	3.80
Transverse colon	--	02	02	1.90
	71	**34**	**105**	**100.00**

The most common type was adenocarcinoma in 87(82.87%) followed by mucinous variant in 15 (14.28%). The most common type of specimen was endoscopic biopsy. 48 (45.73%) followed by loop of colorectum 45 (42.85%) and incisional biopsy 12 (11.42%) (Table-III).

TABLE-III BREAK UP OF COLORECTAL CARCINOMA ACCORDING TO HISTOLOGICAL TYPES

Type	No	%
Adenocarcinoma	87	82.87
Mucinous carcinoma	15	14.28
Signet ring cell carcinoma	02	1.90
Adenosquamous carcinoma	01	0.95
	105	**100.00**

Classification and extent of spread could not be done due to lack of complete clinical information regarding involvement of regional lymph nodes and distant metastases and due to lack of full thickness biopsies, especially of endoscopic origin. However, among 45 colectomy specimens, muscularis propria was found involved in all and serosa in 15 cases. All mesenteric lymph nodes, which were positive for metastasis, were dissected out in 13 (12.38%) specimens.

Most of the patients complained of abdominal pain and bleeding per rectum. History of haemorrhoids was present in 07(6.66%) and inguinal and cervical lymphadenopathy was found in 15 (14.28%) and 02 (1.90%) cases respectively (Table-IV).

TABLE-IV COMMON PRESENTING COMPLAINTS OF THE PATIENTS

Complaint	No	%
Pain in abdomen	75	71.42
Bleeding per rectum	43	40.95
Constipation	42	40.00
Lump in abdomen	30	28.57
Vomiting	15	14.28
Abdominal distention	11	10.47

DISCUSSION

Male to female ratio in our study (2.08:1) was higher than that reported from USA (1.21:1) but was more or less close to Karachi (1.86:1)[8] and Saudi (1.89:1.2.24:1) figures[9,10]. This disparity could be due to the fact that our women remain under-reported as compared to their western counterparts because of cultural and religious traditions. As compared to the west our patients were in an earlier decade of their lives at the time of diagnosis. In a London based study[11] peak age group was plus 80 years, a figure much higher than that of our study. In that study only 01% of the patients were under the age of 40 years whereas in our study as many as 43.8% were below 40 years of age ,including 04 teenagers. In another western study[12] mean age was 52 years, which is 7.37 years higher than our figure (44.6 years). One possible reason of this discrepancy could be exposure of people of this region to some carcinogens possibly of dietary origin from early years of life. Further studies are needed to confirm this. In our study tumours were most

commonly located in the rectum followed by caecum and sigmoid colon with are overall preponderance of left colon. This observation is in full accordance with those reported in literature.[3,5,9,13,14] Pattern of histological variants and clinical complaints is also not much different from those reported in other studies.[5,8,9,13]

CONCLUSION

We conclude that the pattern of colorectal carcinoma in our study, more or less, resembles other studies in respect to histological types, clinical presentation and distribution around the colorectum but regarding age, our patients were much younger as compared to their western counterparts. This difference should be kept in mind while dealing with our own patients. Moreover thorough investigations should be carried out even in the younger age groups with symptoms of this disorder.

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CORONARY ARTERY BYPASS GRAFTING SURGERY: A 22 YEARS EXPERIENCE

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ABSTRACT:
This study presents the results of 3011 patients who underwent coronary artery bypass grafting (CABG) surgery at National Institute of Cardiovascular Diseases (NICVD), Karachi, from 1977 to 1998. Of the 3011 patients, 81 percent, had triple vessel disease. A total of 9964 grafts were done in these patients with an average of 3.3 grafts per patient. Post-operatively, morbidity was comparable to the western data. However the incidence of post-operative wound infection was much higher. Mortality was 9.4 percent during the first 5 years of study. It has dropped down to 3.2 percent in recent years.

KEY WORDS: Coronary artery bypass grafting surgery, CABG..

INTRODUCTION

Coronary bypass grafting (CABG) surgery is now an established palliative procedure in the management of ischaemic heart disease[1]. It not only improves patient symptomatically but is also associated with long term survival[2]. Chances of sudden death during long term follow-up are also reduced[3]. CABG procedure was started at NICVD in 1977. In this study we present our data and experience of this type of surgery and its post-operative morbidity and mortality.

PATIENTS & METHODS

All patients who underwent CABG surgery from January 1977 to December 1998 were included in this study. All the patients were either admitted in hospital through OPD or as an emergency through casualty. Preliminary medication and routine investigations were followed by echocardiography and coronary angiography. Anti-anginal medicines were continued till surgery. Surgery was performed through median sternotomy. Extra corporeal circulation was achieved by aorto-bicaval cannulation. Left ventricle was vented by cannulation through right superior pulmonary vein. Bubble oxygenator was used in most cases. Patients were operated at moderate systemic hypothermia and local cooling. Intermittent aortic clamp with ventricular fibrillation was used for myocardial preservation.

In few cases, however, antigrade cold crystalloid cardioplegia was used. Saphenous vein graft was used in all the patients till 1985. In 1986 the use of internal mammary artery in selected cases was begun. From 1990, onwards internal mammary artery for bypassing left anterior descending artery became a routine. In 1998, use of radial artery was started. Post-operatively these patients were electively ventilated for 4-6 hours. Stay in intensive care unit was for 48 hours, in medium risk patients. All the patients were discharged from hospital on the 10th post-operative day. They were asked to come for follow up at weekly intervals for one month and then twice a year.

From our patient records data regarding all post-operative events in the hospital, predictors of morbidity and status at follow-up, if available were evaluated. The files of patients, who had died during initial hospital stay or later on re-admission, were also thoroughly scrutinized.

RESULTS

A total 3011 patients (2836 male and 175 female) with ages between 23 and 84 years, were operated. All patients presented with angina pectoris (Grade III-IV). Exertional dyspnoea was reported by 602 patients (20%), palpitation by 210 (69%) and giddiness by 72 (2.4%).

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Associated illnesses included hypertension in 933, diabetes mellitus in 1083, mitral valve disease in 36 and aortic valve disease in 28 patients. On angiography 2850 had left anterior descending system involved (Table-I).

TABLE-I DISEASED CORONARY ARTERIES

VESSELS	NUMBER	%
Left main coronary	262	8.7
Left anterior descending	2850	94.6
Circumflex coronary	2449	81.3
Right coronary	2658	88.3

A total of 9964 grafts were done in 3011 patients with an average of 3.3 grafts per patient. Break-up of vessels which were bypassed is shown in (Table-II)

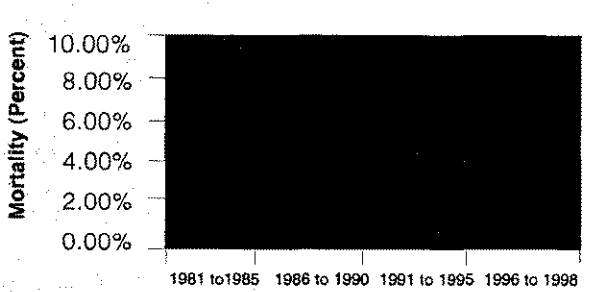
TABLE-II DISTAL ANASTOMOSES

VESSELS	NUMBER	%
Left anterior	2926	97.2
Diagonal/Ramus	1719	57.1
Obtuse marginal	2622	87.1
Right/posterior descrending	2697	89.6

Associated procedures included left ventricular aneurysmallectomy in 53, ventricular plication in 38, ventricular septal defect repair in 4, atrial septal defect repair in 3 and mitral / aortic valve replacement in 62. We identified a total of 395 major complications in our patients which were mediastinitis / sternal infection 216 patients (7.2%), excessive bleeding 187 (6.2%), peri–operative infarction 108 (3.6%) and cerebrovascular accidents 87 (2.8%) patients. 190 patients died with an overall mortality of 6.3%. Various factors identified as major causes contributing to death were peri-operative infarction, low cardiac output, emergency surgery, wound infection and associated valvular surgery.

Yearly break-up shows a relatively higher mortality during first five years which gradually leveled to 3.5% in later years (Fig-I).

FIGURE - I 5- YEARLY BREAKUP OF MORTALITY



DISCUSSION

CABG surgery not only reduces the morbidity but ensures longevity. More then 300,000 operations are being performed every year in the U.S.A. A recent survey to assess the appropriateness of this procedure has reported an incidence of only 2.4% in appropriate procedures[5]. In general patients with severe angina, who do not respond to drug therapy, should undergo surgery. CASS studies have indicated that patients with minimal symptom and single or double vessel involvement show comparable results as those treated medically.

All patients with triple vessel disease particularly those with impaired left ventricular function, should have elective surgery regardless of the symptoms[7]. In the same CASS study survival in surgical group was 89% as compared to 64% in the medical group. More proximal lesions do better after surgery then diffusely diseased vessels with atherosclerosis extending to the periphery. Patients with unstable angina require an early re-vascularisation, preferably after the patient is haemodynamically stabilized. Surgery in unstable patients carry a relatively higher mortality risk[8]. Patients with acute myocardial infarction may get some benefit by emergency re-vascularisation. More experience with thrombolytic therapy in combination with angioplasty has, however, become more promising in such situations. Patients with persistent cardiogenic shock after infarction may be treated with active myocardial resuscitation combined with emergency CABG surgery[9]. A mortality upto 50% is reported, though the survivors do well in the long term[10].

The only established contraindication to CABG surgery is dilated ischaemic cardiomyopathy. Results in patients with thin atherosclerotic vessels remains unpredictable at the time of surgery. Grafting of bypassable segment and redical endarterectomy have been reported to give good results in long term follow up[11,12]. Age above 70 years, carrying a relatively higher mortality of around 10%, is not a contraindication[13].

The most important complications in our patient population were perioperative infarction, cereberal vascular accident, wound infection, renal failure and low cardiac output. Cereberovascular accidents occurred in 2.8% of our patient population; various authors have reported an incidence of 1.3-2.1%[14,15]. It is an extremely disturbing complication for the patient and may occur preoperatively or later during hospital stay. Pre-existing atherosclerotic narrowing of cerebral vessel, embolism and cerebral hypo-perfusion are the contributing factors. Patients who had perioperative infarction in our series were 4.2%. Various reports have shown an incidence of 0.8-2.3% perioperative infarction[16,17]. The overall incidence of perioperative infarction is higher in our series but a yearly break-up shows a higher incidence in the critical days

showing a learning curve. It however stabilized after 1990 and became comparable to the international figures. Incidence of infection has been higher in our patient population, which is 3.8% as compared to 1% in the Western data[18]. Diabetes mellitus, excessive use of diathermy and pre-existing causes like COPD are the main reasons for this higher infection rate.

Another complication which was not noted in our patient population because of lack of adequate data was neuro-psychiatric abnormalities after surgery. In the western data the incidence is as high as 50% in the form of disturbance of sleep, concentration and difficulty in problem solving etc. It is due to microemboli during extra corporeal circulation and they disappear within 5-6 months[6].

The overall mortality in our series was 6.3% which seems quite high as compared to data from various other centres[6,11,16]. If we analyse the yearly break up of mortality (Fig-III), then it will be noticed that after an initial phase of high mortality, which signifies learning phase, mortality has settled to a lower figure. Further, this mortality includes all the patients with the highest risk involved where multivessel grafting was performed, in addition to ventricular aneurysmectomy and valvular replacements.

CONCLUSION

CABG surgery is now a well established treatment for multi-vessel occlusive coronary artery diseases. Our short-term morbidity and mortality have declined over the years and today it is comparable to any other well-established centre around the world.

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EFFECT OF NIFEDIPINE ON CREATININE CLEARANCE AND URINARY PROTEINS IN RENOVASCULAR HYPERTENSION

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ABSTRACT:
Hypertension and impaired renal functions are closely interrelated. Elevated blood pressure can cause renal damage and renal diseases can cause hypertension. Hence to evaluate the effect of Nifedipine on renal function in a hypertensive patient, a study was planned which extending over a period of three months. Fortyfive patients of either sex, aged 25-75 years were given Nifedipine 10 mg twice daily. Their urinary proteins and creatinine clearance were measured. Results were evaluated with base line values on Day 0, Day 30, Day 60 and Day 90. On Day 90 these two parameters were compared to base line (Day 0) values. With Nifedipine therapy, urinary protein reduction was 11.38% whereas creatinine clearance was increased to 13.15%. These changes in urinary proteins were highly significant whereas less significant in creatinine clearance with Nifedipine for three months, thus improving functions in renal impaired patients with hypertension.

KEY WORDS: Nifedipine, Renal functions, Hypertension.

INTRODUCTION

Long standing hypertension leads to organ damage such as encephalopathy, cerebral heomorrhage left ventricular failure and nephropathy[1]. Hypertension and kidneys are closely linked in several ways, kidneys normally responds rapidly to changes in blood pressure by alteration in renal haemodynamics.

These functions of kidneys are reset in established hypertension. Hypertension commonly causes severe renal failure when malignant phase develops. Renal failure is a recognized complication of accelerated hypertension, which causes significant structural changes in peripheral vessels and kidneys. These changes lead to an increase in peripheral vascular resistance and further rise in blood pressure[2,3].

The earliest functional renal change is renal hyperperfusion followed by renal hypertrophy, and microalbuminurea, (renal excretion greater than 30 mg/min). This is reversible by strict blood pressure control but may lead to irreversible renal damage indicated by proteinurea more than 150 mg/L. Strategies aimed at prevention and treatment of hypertension may be the key step towards reduction in the risk of developing end stage renal disease (ESRD)[4,5,6].

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Calcium channel blocker[5] are nowadays widely used for lowering blood pressure. They mainly reduce blood pressure by reducing systemic vascular resistance. Arterial resistance is reduced by inhibiting calcium influx into vascular smooth muscle cell, which results in decrease in smooth muscle tone.

Nifedipine is dihydropyradine second generation calcium antagonist with pronounced antihypertensive efficacy; smooth onset and prolonged duration of action[7].

PURPOSE OF STUDY

To study the effects of Nifedipine therapy on renal functions, especially creatinine clearance and urinary proteins.

MATERIAL AND METHODS

The study was carried in the Department of Pharmacology and Theraueptics, Basic Medical Sciences Institute, Jinnah Postgraduate Medical Centre, Karachi.

A total of 45 patients, between 25-75 years of age, of either sex, were selected for the study. They were known hypertensives with blood pressure above 145/95 mm of

Hg with renal involvement. Patients with diabetes mellitus, congestive cardiac failure, congenital renal anomalies or with any renal pathology were excluded.

This study was carried out for 12 weeks. All patients were assessed once at the start of the study and then after every four weeks till 12 weeks of medication.

Urinary proteins (in mg/24 hours) and creatinine clearance (in ml/min) were estimated on day 0, day 30 and day 90.

RESULTS

Fortyfive hypertensive patients were treated with nifedipine 10 mg B.D. Their urinary proteins and creatinine clearance were estimated on day zero, day 30 and day 90.

After 30 days of treatment urinary protein showed non-significant reduction (from 281±3.99 mg/24 hrs. to 276±3.69 mg/24 hours) whereas after 90 days there was a significant reduction in urinary proteins (249±3.4 mg/254 hrs. P < 0.001) (Table-I & Figure-I).

TABLE-I EFFECTS OF NIFEDIPINE ON URINARY PROTEINS IN mg/ 24HOURS

Drugs	Day 0	Day 30	Day 90
Nifedipine + SEM	281 ± 3.99	276 ± 3.69	249 ± 3.40
n	45	45	45
P value		P1 = N.S.	P2 < 0.001

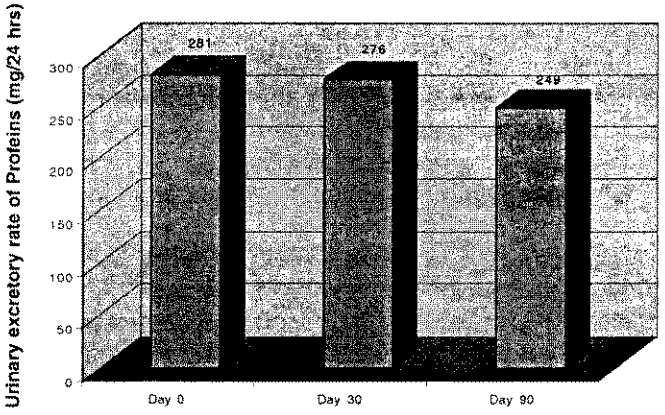

Figure I: *Effects of nifedipine on urinary proteins in mg / 24hours.*

On day 30 there was an increase in creatinine clearance, through in significant from (66 ± 2.3 ml / min to 68 ± 2.7 ml / min) became significant on day 90 (76 ± 3.2 ml / min P < 0.05) (Table-II & Fig-2).

TABLE-II EFFECTS OF NIFEDIPINE ON CREATININE CLEARANCE IN mg /MIN

Drugs	Day 0	Day 30	Day 90
Nifedipine + SEM	66±2.3	68±2.7	76±3.2
n	45	45	45
P value		P1 = N.S.	P2 < 0.05

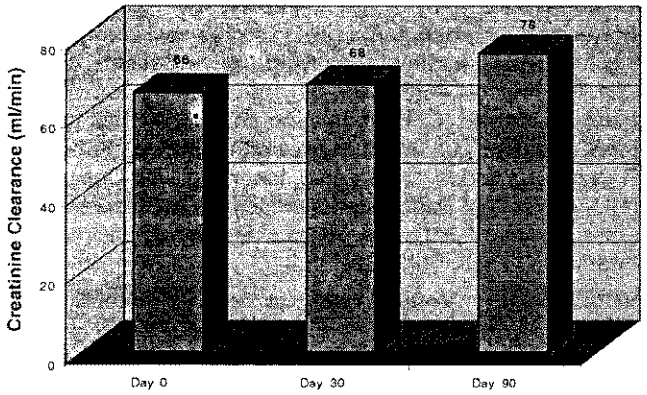

Figure II: *Effects of nifedipine on creatinine clearance in mg /min.*

DISCUSSION

Hypertension is a major contributing factor in deterioration of renal functions and renal damage. Renal diseases cause hypertension, due to imbalance of intrarenal haemodynamics[8,9]. Nifedipine, a calcium channel blocker from dehydropyridine group, acting as antihypertensive has shown consistency in acutely increased effective renal blood flow.

A study of use of nifedipine by Zanettic et al[10] in patients with uncomplicated diabetes mellitus in whom metabolic and renal effect were studied, showed significant decrease of arterial pressure but no modification in creatinine clearance. Microalbumin levels and serum lipids levels were mentioned. In our study we observed significant improvement in creatinine clearance and urinary proteins in patients on nifedipine 10 mg for 3 months. This may be due to exclusion of diabetic patients from our series; perhaps, in diabetics, impaired glucose metabolism may alter biochemical evaluation.

Study by Ferder et al[11] in hypertensive nephropathic patients in whom nifedipine 40 mg / day for 12 months showed reduction in urinary proteins and increased creatinine clearance. This is in complete agreement with our study of nifedipine. The improvement in these parameters may be due to direct vasodilator action attributable to the modification of intrarenal haemodynamics and to a change in glomerular permeability which improved renal functions significantly.

It seems that nifedipine significantly decreased mean blood pressure causing no aggravation of renal dysfunctions in hypertensive patients with renal impairment, who rather showed improvement. It seems that nifedipine not only can attenuate increased blood pressure but also inhibit progression of hypertensive renal injury probably by afferent arteriolar vasodilation.

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TRANSURETHRAL RESECTION FOR BENIGN PROSTATIC HYPERPLASIA: AN ANALYSIS OF 200 CASES

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ASGHAR ALI

ABSTRACT:

A prospective study was conducted in the Department of Surgery, Bahawal Victoria Hospital, Bahawalpur, from January 1996 to June 1999 to evaluate the results of transurethral resection for benign prostatic hyperplasia (BPH) in 200 cases. Patients' ages ranged from 45 to 90 years with maximum incidence between 50 to 65 years. One hundred and forty patients (70%) presented with urinary retention and 30 patients (15%) presented with irritative symptoms. Post operative complications were, haematuria in 10, transient incontinence in 10 and clot retention in 5 patients. Mean hospital stay was 6.48 days, with overall mortality at 0.5%. Transurethral resection is an excellent, safe and cost effective procedure for BPH.

KEY WORDS: Transurethral resection (TUR), Benign prostatic Hyperplasia, Prostate.

INTRODUCTION

Benign prostatic hypertrophy is a common problem in aged males1. Clinical presentation is usually with retention of urine, frequency, urgency, dribbling and incomplete evacuation of bladder. Treatment modalities include TUR-P, transurethral incision of prostate (TUIP), transvesical prostatectomy (TVP), thermotherapy, laser, transurethral needle ablation. Drugs used are alpha blocking agents and 5 alpha reductase inhibitors2. The treatment of choice is resection of the tissue by commonly performed procedure TUR-P, to relieve symptoms of bladder outlet obstruction3. The purpose of study is to evaluate the results of transurethral resection in patients with BPH.

MATERIAL AND METHODS

A total of 200 cases of BPH were included in the study, who underwent TUR from July 1997 to June 1999 in the Department of Surgery, Bahawal Victoria Hospital, Bahawalpur. Diagnosis was made on the basis of history, clinical examination including rectal examination, ultrasonography, especially for prostatic enlargement and cystourethroscopy. Blood complete examination, urine complete examination, serum sugar, serum urea and creatinine were carried out. ECG, X-ray chest and X-ray KUB were performed before surgery. The patients selected were those with prostatic size less than 5 cm. Patients with vesical calculi or bladder diverticula were not selected for TUR. All patients were operated after controlling infection, if any.

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TUR was performed with Karl Storz resectoscope. Antibiotics were given to all the patients postoperatively. Plain sterilized water was used during resection. Threeway Foley's catheter was passed and continuous irrigation was done with 0.9% normal saline. Catheter was removed on the 5th or 7th day. Postoperative complications were recorded. Histopathology was done in every case. Results were labelled as good, satisfactory or poor. In good results patients had no complaint, in satisfactory results patients complained of thin stream or irritative systems and poor results were when patients suffered major complications like permanent incontinence.

RESULTS

Age distribution of BPH is shown in (Table-I).

TABLE-I AGE DISTRIBUTION

Age	No. of Patients	Percentage
45-50	12	6
51-60	93	46.5
61-70	70	35
71-80	20	10
81-90	5	2.5

Patients of BPH had associated pathologies as shown in (Table-II). Patients with vesical calculi were not operated by TUR, and were excluded from the study.

TABLE-II ASSOCIATED PATHOLOGY

Pathology	No. of Patients	Percentage
Haemorrhoids	10	5.0
Inguinal Hernia	20	10.0
Urethral stricture	5	2.5
Hypertension	20	10.0
COPD	10	5.0
Diabetes mellitus	5	2.5
Total	**70**	**35.0**

The procedures performed are shown in (Table-III).

TABLE-III PROCEDURES PERFORMED

Pathology	No. of Patients	Percentage
TUR-P	190	95.0
TUR-P + internal urethrotomy	5	2.5
TUR & herniorraphy	5	2.5

The complications are shown in (Table-IV).

TABLE-IV COMPLICATIONS OF TUR

Intra-Operative Complications	No. of Patients	Percentage
Haemorrhage	2	1.0
Myocardial Infarction	1	0.5
Post-Operative Complications		
Primary haematuria	15	7.5
Clot retention	10	5.0
Secondary haematuria	5	2.5
Transient incontinence	15	7.5
Permanent incontinence	1	0.5
Epididymoorchitis	2	1
Urethral stricture	3	1.5
Redo TUR-P	3	1.5
COPD	5	2.5

Hospital stay was six days in 150 patients, 6-10 days in 45 patients and 11-20 days in five patients. One patient (0.5%) out of 200 suffered an attack of myocardial infarction per-operatively and expired on the second postoperative day.

Overall results are shown in (Table-V).

TABLE-V OVERALL RESULTS

Result	No. of Patients	Percentage
Good	180	90
Satisfactory	16	8
Poor	04	2

DISCUSSION

BPH is a common problem between the ages of 50-90 years in males. Average age of BPH in our series was 59.85 years. Average age reported in literature is from 60.7 years to 62.5 years4-7. Reported incidence is 15-20% at age of 60 years and 50% at age of 80 years8. One hundred and fifty patients (75%) out of 200 patients presented with retention of urine and catheter had to be passed. Reported evidence of retention of urine in BPH in the literature is 63.3% and 60%5. Fifty patients (25%) presented with irritative symptoms of frequency, urgency and nocturia.

Reported complications in literature are haemorrhage (4.75%), urinary tract infection (8.5%) and urethral stricture (2.25%)9. Reported hospital stay by Talpur et. al. is 8.3 days4 and by Oonwala is 11.5 days6 and by Zwergei et al, 3.8 days9. The overall mortality in our series was 0.5%. Mortality reported by Oonwala is 1.9%, by Talpur is 2.67% and by Zwergei 0.5% of TURP.

We had achieved good results in 90% of patients. Transurethral resection for BPH is an excellent procedure, as it is safe, cost-effective and well tolerated.

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GIANT MULTINODULAR GOITRES: SURGICAL EXPERIENCES IN NORTHREN PAKISTAN

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ABSTRACT:
The treatment of 40 cases with giant multinodular goitres is reported. This study was conducted over a 4 year period at DHQ Hospital Rawalpindi in Northern, Pakistan. This is a high incidence region. Thyroidectomy for giant goitres are associated with a high incidence of post operative asphyxia. Prophylactic tracheostomy was performed in eight cases who were more likely to be asphyxiated. Bigger and nodular goitres are also associated with greater structural distortion. The surgical technique and results are discussed.

KEY WORDS: Goitre, Surgery.

INTRODUCTION

District Headquarters hospital is the main referral hospital for all Tehsil Head quarters, rural health centers and primary health centers. It therefore drains the areas where endemic goiter has achieved alarming proportions. 15% of all elective operations performed by the author are on the thyroid gland. The study includes patients with unusually large goiters operated over a period of 4 years from June 89 to June 93.

PATIENTS AND METHODS

This study was conducted by the Department of Surgery DHQ Hospital Rawalpindi from June 1989 to June 1993. The total number of patients admitted with unusually large goiters was 40. Male to female ratio was 1:8. The main catchment areas being Murree and adjoining hills as well as Azad Kashmir, Swat and Abbottabad. We followed the criteria laid down by Emery and Gyoh[1] of labeling a goitre as a giant one. Cosmesis (51%) was the main reason for attending the hospital, followed by pressure symptoms (34%) and toxic symptoms (12%). Apart from these there were two emergency admissions due to sudden severe respiratory distress1. All these patients had standard investigations carried out prior to surgery, except those who presented as emergency. These included thyroid scan, thyroid function tests, indirect laryngoscopy, X-ray Chest and Cervical Spine. Radiology of the thoracic inlet was done where indicated. The recurrent laryngeal nerves were identified. Ligation of the Inferior thyroid artery was then done in continuity. In anticipation of post operative respiratory problems due to laryngeal edema as a result of polonged anaesthesia and soft consistency of the trachea, prophylactic tracheostomy was established in eight cases. Large multinodular goitres have overstretched strap muscles which were plicated. We followed the technique described by Olurin[2]. The retrosternal extension of the gland was dealt by upward traction and finger dissection in the subcapsular plane. The dead space was then obliterated by Chromic catgut sutures. The redundant skin was dealt with by excision of an ellipse of skin.

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RESULTS

The operating time ranged from an hour and a half to as long as two and half hours. The mega thyroids weighed after the operation ranged from 650 to 1800 gms (Fig I-III) (Table-I). The patients had a long standing history of the disease. Prophylactic tracheostomy was established in 8 patients.

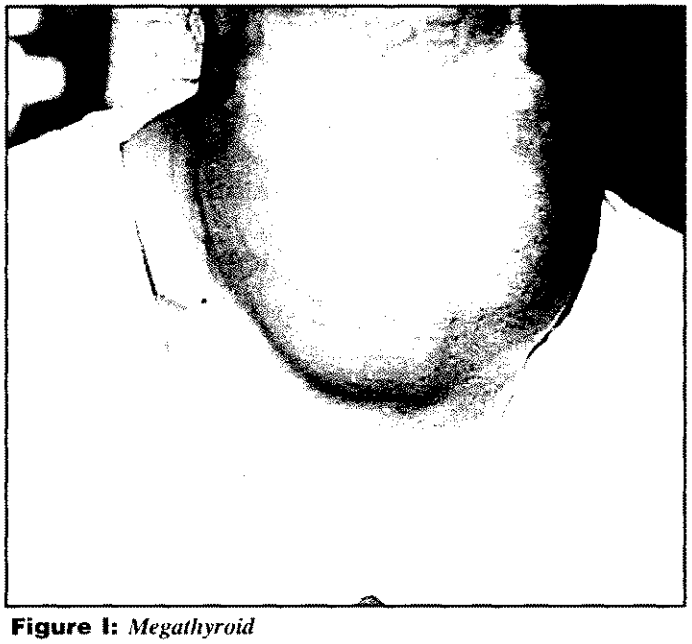

Figure I: *Megathyroid*

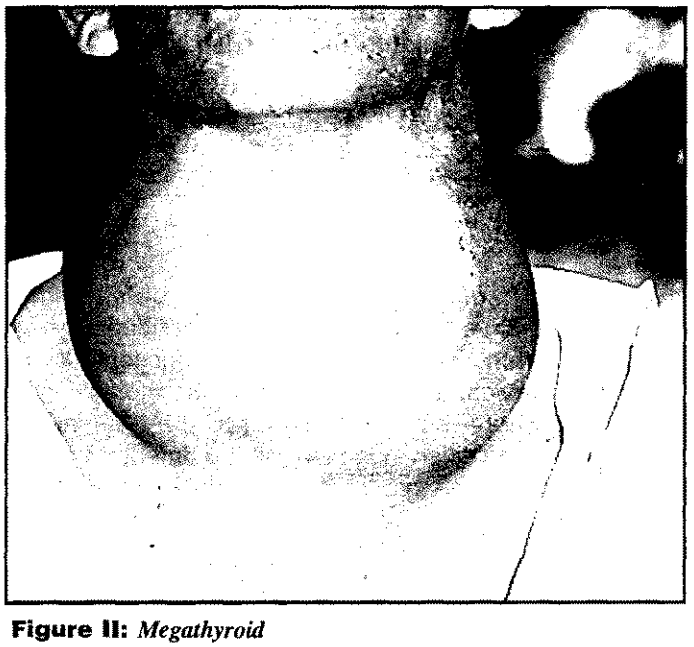

Figure II: *Megathyroid*

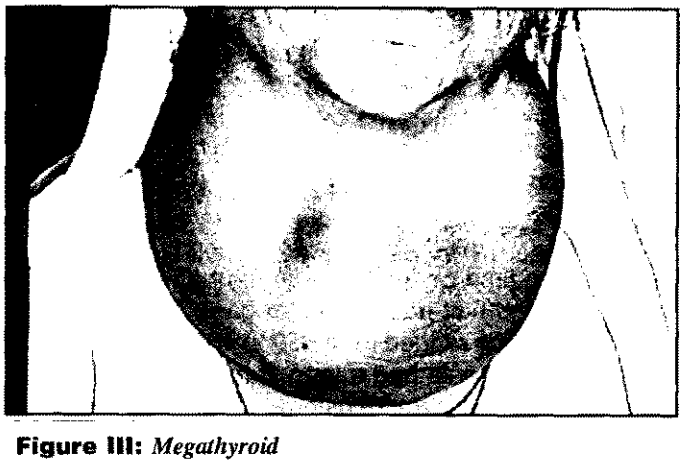

Figure III: *Megathyroid*

TABLE-II WEIGHT OF GOITRES IN PATIENTS WHERE TRACHEOSTOMY DONE

Age	History	Weight Of Gland Removed
50 years. F	20 years	1800 gm
54 years. F	25 years	1648 gm
35 years. F	15 years	1004 gm
35 years. F	17 years	0904 gm
40 years. F	16 years	0804 gm
41 years. F	15 years	0802 gm
25 years. F	09 years	0746 gm
45 years. F	18 years	0659 gm

Early post operative complications encountered were haemorrhage (5%), tetany (4%), recurrent laryngeal nerve damage (1.5%) and minor wound sepsis (4%). Late post operative problem of redundant and wrinkled skin occurred in two patients (Fig IV). One patient developed a hypertrophic scar and another a stitch granuloma.

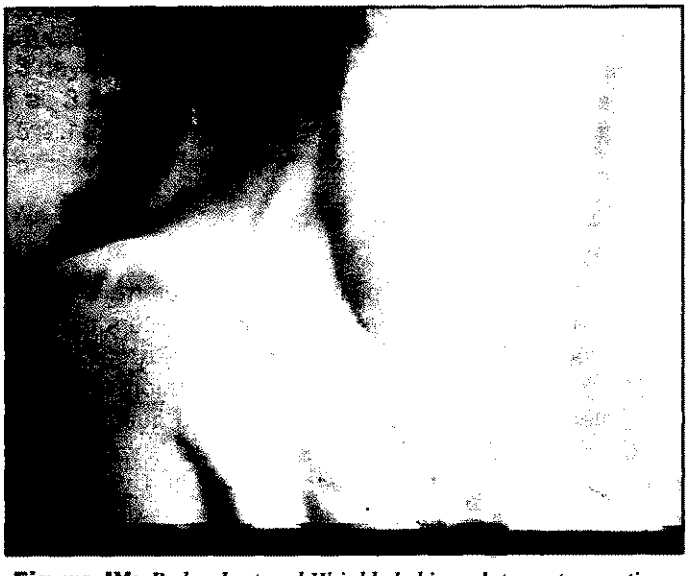

Figure IV: *Redundant and Wrinkled skin: a late post operative complication.*

Overall mortality was one, in 40 mega thyroids, in a lady with a giant recurrent goitre. She had indurated thyroid tissue fixed to the strap muscles as well as surrounding tissues which bled considerably peroperatively. She later developed Disseminated Intravascular Coagulation and ARDS and thus succumbed. She was the only mortality we had in a series of more than 200 thyroidectomies that were performed during the interval between 1989 to 1993.

DISCUSSION

Giant goitre is defined as a goitre protruding beyond chin or jaw[1]. The giant goitre is an interesting phenomenon exclusively confined to regions of endemic goitre. A

majority of patients with giant goitres usually desire operation for social and cosmetic reasons. Some of them however suffer frequent attacks of intermittent respiratory tract obstruction which complicates the post operative course. About a fifth of them present with acute respiratory distress requiring emergency surgery. In our series we had two patients (5%) who presented as an acute emergency requiring immediate throidectomy. The perioperative management of the disease is both formidable and hazardous. The operating time is not only longer than for standard thyroidectomy but mortality can also be unacceptably high[3]. The decision relative to surgical intervention are based primarily on clinical judgment. Early surgical intervention with tracheo-esophageal compression caused by enlarged thyroids results in minimal post operative morbidity[4]. The problem in surgery of these goitres is associated with structural distortion, increased operating time and risk of post operative asphyxia. The most dreaded being respiratory distress which requires immediate action and hence necessitates the availability of a thyroidectomy team[2]. The other cause of respiratory obstruction is laryngeal edema due to the very lax mucosa of the relatively narrow subglottic area of the larynx, which is capable of swelling up and obstructing the lumen under conditions of progressive edema. This usually occurs after 5 to 12 hrs after surgery. Tracheomalacia has been reported[5,6] but we have never seen a case in this series. Total throidectomy is an operation that has generally been reserved for the management of Differentiated thyroid carcinoma. However total thyroidectomy is an appropriate operation for the management of diffuse Multinodular Goitre, when the entire gland is involved because it precludes patients from requiring further surgery for recurrent disease, with its high associated risks. The protection of recurrent laryngeal nerves and Parathyroid glands must still be paramount in dealing with benign thyroid disease[6]. Subtotal thyroidectomy on the other hand reduces the risk as in our series. The truncal ligation of the Inferior thyroid artery during bilateral subtotal thyroidectomy does not cause hypoparathroidism or hypocalcemia[7]. Moreover the chances of intraoperative injury to External branch of Superior Laryngeal nerve (EBSLN) can result in significant post operative voice problems as reported by Cernea-C- R et al[8]. The frequency of type 2b EBSLN is considerably higher in large goitres. In addition to the above peroperative difficulties is the substernal extension of the thyroid. The recommended technique includes concomitant finger dissection and upward traction of the cervical thyroid through the subcapsular plane, with the obliteration of the post resection substernal dead space by sutures[9]. Recurrent goitre is a dilemma. Prevention must be stressed because reoperation of the thyroid gland present technical difficulties and are associated with an increased risk of hypoparathyroidism and permanent hoarsness[10]. Intraoperative digital palpation of the entire gland is essential for detecting residual macroscopic thyroid nodules and all enlarged nodules must be removed[11]. In conclusion different studies conducted by various authors have one common theme, to reduce the operative morbidity and mortality of the procedures. The methodology to be adopted should center around securing blood vessels before mobilization, identification of recurrent laryngeal nerves, ligation of the inferior thyroid artery in continuity and finally the establishment of prophylactic tracheostomy where surgery is prolonged.

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FUSIFORM MEGALOURETHRA

A CASE REPORT

TARIQ BURKI, ABID QAZI, M. NAEEM KHAN.

ABSTRACT:
We report a case of congenital fusiform megalourethra with anorectal agenesis, rectovesical fistula and absent right kidney. The patient also had uremia. We performed pelvic divided colostomy and vesicostomy. Unfortunately, the patient died on fifth day of life due to septicemia.

KEY WORDS: Congenital megalourethra, Associated anomalies.

INTRODUCTION

Fusiform megalourethra is characterized by long, dilated, flabby urethra, which balloons out when the patient passes urine. It is due to congenital absence of corpus spongiosum and corpora cavernosa. The length of the penis is also increased with redundant skin. The condition is usually associated with multiple serious congenital malformations especially urogenital and gastrointestinal. This condition has a high mortality rate due to these associated congenital anomalies. We report on one case that had a fusiform congenital megalourethra.

CASE REPORT

A two days old baby was referred to us from another hospital with complaint of absent anal opening and abdominal distention. The patient had not passed urine since birth.

On examination, the baby had absent anus with sagging bottom and absent anal reflex, left undescended testis, accompanied with abdominal distention. There was also megalourethra of fusiform variety with urethral orifice on ventral side. On palpation corpus spongiosum and corpora cavernosa were absent. On pressing the penis, small amount of urine was expressed with bubbles of air. There was also bilateral Talipes Equinovarus.

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Invertogram was suggestive of high type of anorectal agenesis. Haemoglobin was normal. Urea (88mg), creatinine (3.7mg), electrolytes (Na 163.K>6) were all elevated. Ultrasound showed absent right kidney with a cystic mass in the pelvis.

Peroperatively, there was distended rectum with rectovesical fistula. The distended rectum was filled with urine and was draining the bladder and appeared on the ultrasound as a cystic mass in the pelvis, which was the cause of urinary obstruction. Left intra abdominal testis with absent right kidney were also noted. Pelvic divided colostomy with vesicostomy and catheterization was done (Fig-I). Unfortunately, the patient died on fifth day of life due to uremia and septicemia leading to DIC.

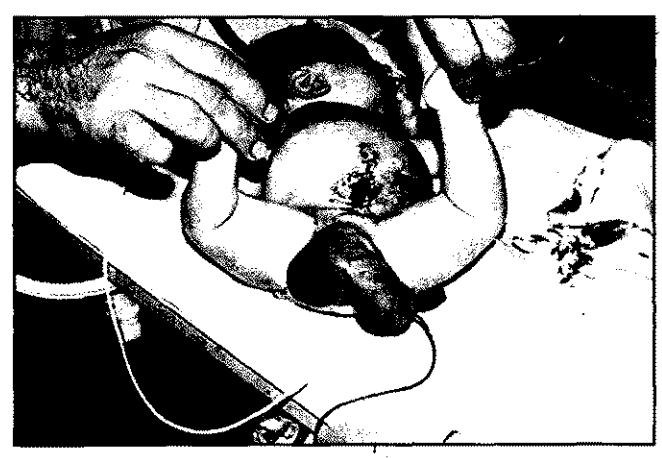

Figure I: *Patient with megalourethra and anorectal agenesis*

DISCUSSION

Megalourethra is a rare congenital anomaly characterized by dilatation of the penile urethra without evidence of distal obstruction[1,2,3]. Kelalis has defined megalourethra to .be an extreme form of urethral diverticulum without recognizable obstructive lesion[4]. It is a consequence of partial or complete agenesis of spongy and / or errectile tissue leading to a urethra with no support resulting in a long flabby and dilated urethra without any support.[2,4,5] Dorairajan have attributed this to be due to failure of mesodermal uretheral folds to differentiate adequately or completely into errectile tissue.[4,6]

Usually megalourethra is classified into two types: scaphoid and fusiform.[2,5,6,7] Megalourethra has a high incidence of associated anomalies, especially genitourinary and gastrointestinal[4,5]. In our case the child had anorectal agenesis, rectovesical fistula, left undescended testis and an absent right kidney. The fusiform variety is associated with more severe associated anomalies.[4,5,6] More than eleven cases of fusiform megalourethra have been reported in the English literature, most of them are either azotemic or died of associated anomalies. It is also frequently associated with prune belly syndrome which by itself has a high mortality rate.[6,7,8,9,10] Sometimes even when the abdominal wall is normal with descended testis, characteristics dystrophic anomalies of urinary tract are frequently present.[1,2,7,11,12] It is also frequently associated with anorectal anomalies like[4,5,6,13] VATER association[13], malrotation[1], urethral duplication[5,13,14] hydroureter and hydronephrosis[1,12,14] aberrant adrenal tissue[4] etc.

Diagnosis is very simple and is obvious on inspection alone. Parental diagnosis can be made by ultrasonography[4,6,11,15] All authors agree that postnatally investigations like ultrasound, IVU, MCUG, Cystoscopy etc should be performed to evaluate the associated anomalies. The megalourethra itself may not cause any obstruction[4] but usually when the urethra dilates during voiding, there is stasis of urine leading to sepsis and death[4,5]. In later age, it may cause erectile dysfunction[2]. Our patient died on fifth day of life due to uremia leading to septicemia and disseminated intravascular coagulation. In many instances, the other anomalies are more serious and life threatening than megalourethra itself.[4,5,6,13] Management of the condition includes management of associated conditions and megalourethra itself. In our patient we did pelvic divided colostomy and vesicostomy, which is also recommended by other authors for palliative purpose[4,5] .For treatment of megalourethra, principles of hypospadias surgery are applicable for its correction[6]. It can be a staged procedure[5,13] or it can be repaired in a single stage by degloving the penis skin, excising the urethra and suturing it over a stent with reapproximation of skin[4,6,7,8].

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TERATOMA OVER SCALP WITH EXTENSION TO EXTRADURAL REGION THROUGH DEFICIENT TEMPORAL BONE

A CASE REPORT

ALI RAZA BROHI, SHAMS RAZA BROHI*

ABSTRACT:
Extracranial teratoma over scalp is a rare lesion. A five day old female neonate presented with a huge mass over left parieto-temporal region of scalp. Investigations revealed no associated anomaly. At exploration deficient skull table in the temporal region, at the base of the lesion was found. The tumour was found adherent to dura mater and was separated by sharp dissection. Cut section revealed a large fluid-containing cyst with bowel loops. Biopsy showed mature teratoma.

KEY WORDS: Teratomas, Congenital lesions, Neonatal tumors.

INTRODUCTION

Teratoma is a true tumor or neoplasm composed of multiple tissues of kinds foreign to the parts in which it arises[1]. The occurrence of teratomas in head and neck region is a rare event[2]. Extracranial teratomas over scalp are infrequently reported in literature. Herein we report a rare variety of teratoma with interesting features.

CASE REPORT

A five day old female baby weighing 3.5 kg was referred to private Medical Centre in Nawabshah from another hospital with a huge mass over left parieto-temporal region of scalp. Baby was born at full term at home by normal vaginal delivery. Mother never had any ultrasound in antenatal period. General examination revealed nothing significant. On local examination a large swelling measuring 15cm x 15cm was found in left parieto-temporal region extending from posterio-superior to left ear to outer canthus of left eye. The left pinna was deformed and pushed downwards by the mass. It was covered with normal looking skin (Fig-I). The swelling had cystic feel with few firm areas and was fixed at its base. Transillumination test was positive. Ultrasound revealed predominantly cystic lesion with few areas of mixed echo pattern. The mass was entirely extradural and brain was at its normal position. X-ray skull showed deficient skull table at the base of the swelling.

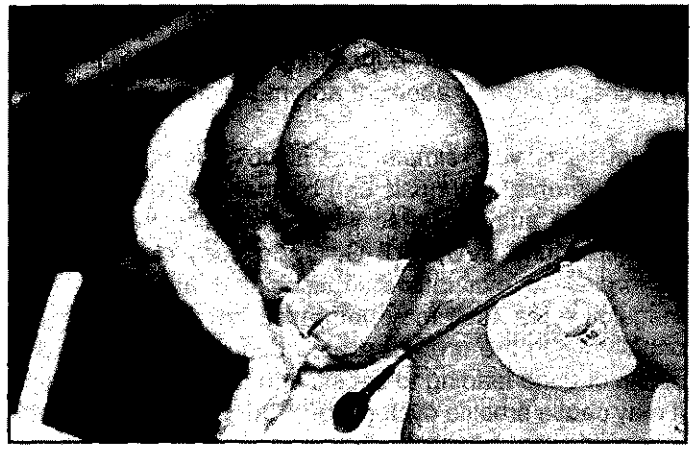

Figure I: *A large tumour is present around the left ear*

The patient was operated via an incision placed within hairline, raising scalp skin flap. By careful dissection mass was excised by separating it from dura mater at its base where bone was deficient. Nothing was done for bony defect. In post operative period seroma collection occurred below the skin flap that was aspirated on two occasions. On cut section swelling revealed a large cystic area with multiple bowel loops (Fig-II). Biopsy showed

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Figure II: *Inra operative view showing a large cyst with bowel loops*

Figure III: *Nicely healed scar within hair line but pinna is deformed*

mature teratoma. At six months follow up patient is doing well but her left pinna is still deformed (Fig-III).

DISCUSSION

Congenital teratomas are tumors with an incidence of 1 in 4,000 live births[3]. The incidence of cervicofacial teratomas is one in 20,000 to 40,000 live births[4]. The head and neck region is an uncommon site for teratomas and accounts for approximately 2-9% of all teratomas[5]. There have been few reports of teratomas involving tongue, tonsils and cervicofacial areas[6]. Most of these tumors are present at birth. The frequent use of ultrasound in antenatal period made it possible to diagnose these lesions early in fetal life. Many such lesions are associated with polyhydramnios[7].

The treatment of teratomas is complete surgical excision where possible. Recurrence is likely following incomplete removal. In our patient no complication occurred during pregnancy and patient had no associated anomalies. The presence of tumour in parieto-temporal region, absence of bony table and extension of the lesion to intracranial region are never reported before. In a case presented in one of the clinical meetings of paediatric surgery tumor at the same site was associated with left sided Bochdalek diaphragmatic hernia. The patient survived following surgery for both the lesions. In that patient skull bone was intact[8]. At six months follow up our patient is doing well with no signs of recurrence although bony defect is still palpable and left pinna is deformed.

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LAPAROSCOPY IN THE MANAGEMENT OF IMPALPABLE UNDESCENDED TESTES

MUHAMMAD TALAT MEHMOOD, SALEEM KHAN, JAVED AHMED

ABSTRACT:
Management of impalpable testes poses a diagnostic and therapeutic challenge. A case of impalpable testes is reported, which was managed successfully by staged laparoscopic Fowler-Stephens orchidopexy.

KEY WORDS: Undescended Testes, Laparoscopic orchidopexy.

INTRODUCTION

Cryptorchidism affects about 0.8–1.7%[1,2] of male infants and 11–20% of these are impalpable.[3,4] Management of impalpable testes poses a diagnostic and therapeutic challenge. Sonography, CT scanning, MRI and venography have been used as diagnostic modalities with non-specific reliability[5,6]. Nowadays laparoscopy has become the method of choice for evaluating the impalpable testes[7]. In this case report we describe our experience of laparoscopic orchidopexy.

CASE REPORT

In July 1997, a 3 year-old child presented to a private hospital with bilateral undescended testes. On examination, both testes were impalpable with normal looking penis. He had ultrasound and CT scanning which were inconclusive. HCG stimulation test was performed which showed positive response for the presence of testicular tissue.

The child underwent laparoscopic examination under general anaesthesia. He was catheterized with 10 Fr feeding tube to decompress the bladder. An incision was made in the umbilicus. Purse string suture was applied including both fascia and peritoneum. A 10 mm port was inserted and tied with purse string suture. CO2 was insufflated at a pressure of 8-10 mm Hg. Laparoscope with an attached camera was inserted through this port. Two further 5mm working ports were inserted at the lateral border of rectus muscle slightly at a higher level than the umbilicus in each flank under visual control. Laparoscopic examination revealed bilateral intra-abdominal testes. It was decided to perform first stage Fowler-Stephens procedure and testicular vessels were clipped. Patient had uneventful post-operative recovery and was sent home the next day. He was admitted six months later for second stage. Right inguinal incision extending laterally and superiorly was made through abdominal muscles. Peritoneum was opened laterally to reveal the right testes with its clip. Testicular vessels were ligated and divided above the clip. A wide peritoneal cuff is created around the testes and vas, and both the structures were carefully mobilized. The most direct course through the abdominal wall was opted to place the testes into subcutaneous scrotal pouch. Wound was closed in layers. Similar procedure was carried out for the left testes. At followup both the testes are of good size and well down in scrotum.

DISCUSSION

Laparoscopy was used in the diagnosis of impalpable testes for the first time in 1976[8]. Rapid refinement in technology and instruments has not only established the laparoscopy as a very useful diagnostic tool, but also widened its role as a therapeutic approach to the impalpable testes[7]. The accuracy of laparoscopy in locat-

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ing the presence or proving absence of a non-palpable testes is almost 100%[8]. In our case, laparoscopy was helpful in locating the intra- abdominal testes, while ultrasound and CT scan had failed to do so. Other studies have also showed poor results and unreliability of ultrasonography and CT scanning in diagnosing impalpable testes[5,6]. Impalpable testes also pose special problem in performing successful orchidopexy. The options include staged orchidopexy, traditional Fowler-Stephens orchidopexy, microvascular testes autotransplantation or laparoscopic orchidopexy[6,9,10,11]. We have used laparoscopy for the first stage of Fowler-stephens orchidopexy and open surgery for the second stage successfully. Other studies have also shown very good results of laparoscopic Fowler-Stephens orchidopexy in cases of intra-abdominal testes[11,12]. We believe that laparoscopy is not only safe and effective at localizing impalpable testes but laparoscopic–assisted orchidopexy also replaces an open procedure in suitable cases.

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CONGENITAL LUNG CYST: IS IT A DIAGNOSTIC DILEMMA?

A CASE REPORT

JAMSHED AKHTAR, BASHIR AHMED SOOMRO, NAYMA RASOOL, NAZISH GUL, ABDUL AZIZ

ABSTRACT:
A two years old male child presented with respiratory distress since the age of three months. He received treatment with the diagnosis of pneumonia but never became asymptomatic. X-ray chest revealed a large air filled cyst in right lung field with shifting of the mediastinum to the opposite side. Chest intubation was done elsewhere with the diagnosis of pneumothorax with temporary relief of symptoms. CT scan done at our institute showed a large cyst occupying almost whole of the right hemithorax. At thoracotomy a huge cyst was found in the right upper lobe with destruction of parenchyma. Right upper lobectomy was performed. Dramatic improvement in general condition occurred and the patient was discharged after two weeks.

KEY WORDS: Congenital lung cyst, Diagnosis, cyst, lung.

INTRODUCTION

Congenital cystic lesions are rare and experience at single institute is limited[1]. The classification and embryology of these lesions are still not agreed upon[2]. At times it becomes difficult to draw a line between congenital and acquired cystic diseases. In this report we are describing our experience of one such case that remained undiagnosed for a long period although history and investigations were suggestive of the correct diagnosis.

CASE REPORT

A two years old male child resident of Jacobabad, weighing 9 kg, presented with repeated episodes of breathlessness and fever since the age of 3 months. Patient was born at full term and remained well for three months when he developed fever and respiratory distress. Patient was treated for pneumonia but never recovered completely. Five months back the patient again developed the same symptoms but this time intensity was severe and he developed cyanosis and cardiac failure, which were managed by digitalization in addition to treatment for pneumonia. An ECG done at that time revealed pattern of right bundle branch block. Following improvement he was referred to another physician with diagnosis of cyanotic congenital heart disease. He was then put on antituberculous drugs. During this period x-ray chest was not done. As patient's condition did not improve he was brought to another city where after performing x-ray chest a diagnosis of right-sided pneumothorax was made and chest intubation performed (Fig-I). Patient's condition improved but radiologically cystic lesion persisted although the size reduced (Fig-II). Patient was discharged after two weeks. After three months patient was brought

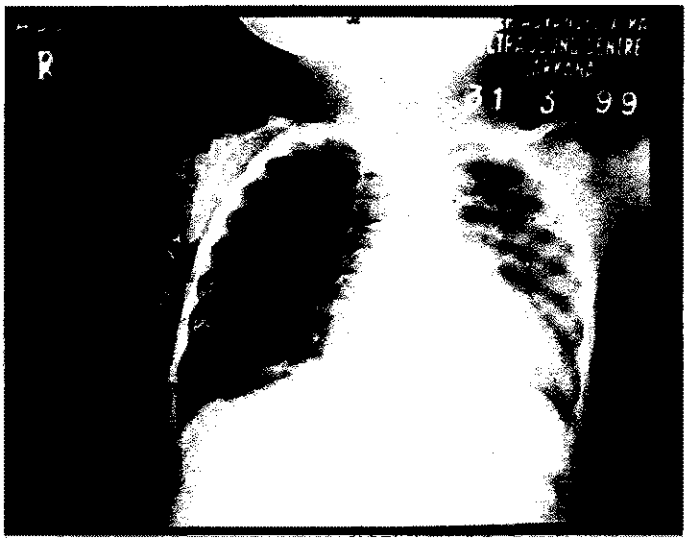

Figure I: *X-ray chest PA view showing a cystic lesion on right side.*

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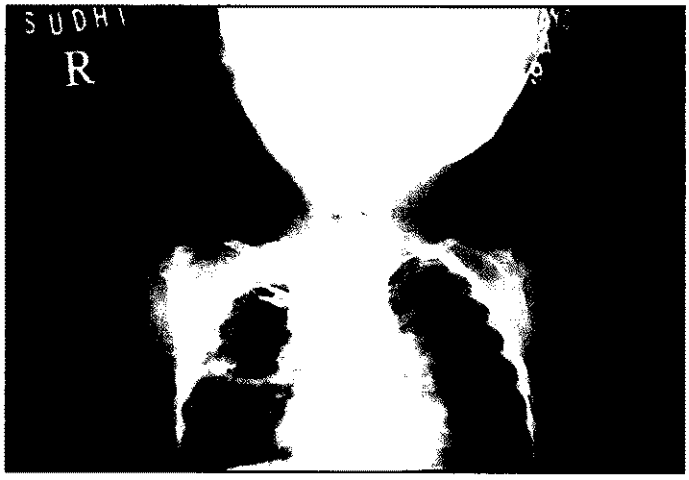
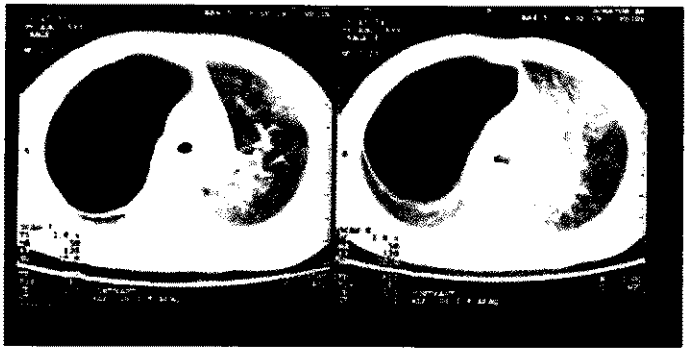


Figure II: *X-ray showing chest tube in the cyst, the size of which has decreased.*



FigureIII: *C.T. scan showing huge cyst in right hemithorax compressing adjacent lung tissue.*

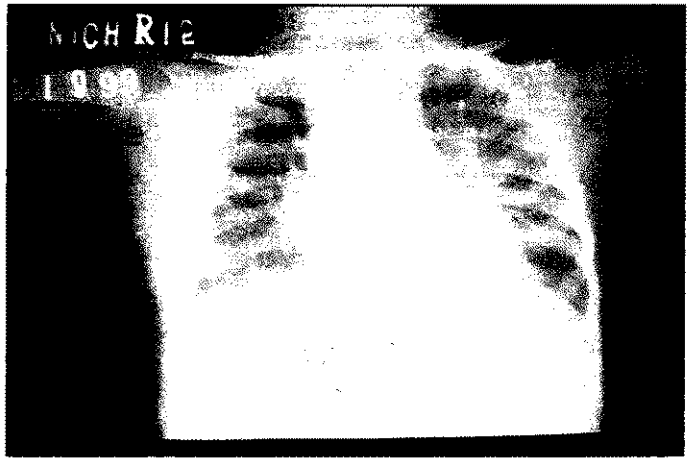


Figure IV: *X-ray chest at discharge showing complete expansion of right lung following upper lobectomy.*

to NICH with similar complaints and admitted to Medical unit. Surgical opinion was sought after a week following investigations including CT scan.

On examination the patient was found anaemic with respiratory rate of 60 per minute and he could not lie supine in bed. Right side of chest was bulging and barely moving. Air entry was markedly reduced on right side. Abdomen was distended with liver palpable 6 cm below costal margin in mid clavicular line. X-ray chest revealed a large cystic lesion on right side with shifting of mediastinum to the left. CT scan showed a huge cyst occupying almost whole of right hemithorax with pressure effects on surrounding structures (Fig-III). At elective thoracotomy following improvement in general condition, a large cyst was found occupying upper lobe of right lung with destruction of the parenchyma. The cyst was unilocular. Upper lobectomy was done. Lower lobe expanded following the removal of the cyst. Chest drain was placed and connected to under water seal. Postoperative x-ray showed expansion of remaining lobe and chest tube was removed on the third day. Two days after removal of chest tube patient developed fever and respiratory distress. X-ray chest revealed pneumothorax and chest tube was placed again. Patient showed gradual improvement with subsidence of fever and respiratory distress. Patient started eating properly and started playing with other patients. Chest tube was removed after a week and three days following that he was discharged. At discharge x-ray chest showed completely expanded residual right lung with centralization of mediastinum (Fig-IV). Biopsy report was that of congenital lung cyst that was lined by respiratory epithelium with thick wall containing cartilage and smooth muscles.

DISCUSSION

Congenital lung cysts are less common than the acquired cysts. These cyst may be single or multiple and are often confined to one lobe[3]. Peripheral lung cysts are the result of developmental abnormality in the 6th to 16th week of gestation. Anomalies occurring in early period results in mediastinal bronchogenic cysts[4]. Congenital peripheral lung cysts are true cysts and are lined by columnar ciliated epithelium. They do not disappear spontaneously but usually remain consistent in size and frequently have thickened wall. Following infection the lining epithelium may be destroyed and then identification becomes more difficult.

These cysts usually produce progressive symptoms. The mere presence of such cysts can result in repeated chest infections with failure to thrive. They usually communicate with the bronchus and may lead to air trapping resulting in tension cyst with pressure symptoms. Some times they lead to tension pneumothorax and mortality of such condition is very high[5].

Plain x-ray chest is usually diagnostic as air filled cyst has special characteristics, which include linear pattern within translucent area denoting their fine trabeculation. Presence of compressed lung at apex or base and absence of hilar shadow of collapsed lung as in pneumothorax are also suggestive of lung cyst6. Repeated aspiration may

provide temporary relief by decreasing the size of the cyst but cystectomy/lobectomy is the only definitive treatment, which should not be delayed.

Our patient had typical history of repeated chest infection and respiratory distress. The x-ray chest revealed classical features of the cyst even then diagnosis of pneumothorax was made and chest intubation was performed that temporarily improved the condition but cyst never disappeared completely, which is another characteristic feature of this condition. Lobectomy relieved the patient of the symptoms that he had suffered for a long time.

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