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A study on clinical presentation scrotal swellings at a tertiary care hospital

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Abstract

Sometimes scrotum can become swollen without any apparent cause. This condition, known as idiopathic scrotal edema, is thought to be caused by streptococcus hemolyticus and Cl. Welchii.

Scrotum can become swollen due to systemic illnesses causing generalized edema, as in congestive cardiac failure (CCF), nephritic syndrome, and cirrhosis of liver and hypoproteinaemic states. The 100 cases admitted to the surgical wards in Medical College Hospital and Research Center, formed the material for this study. Various types of hydrocele formed the majority of the cases (50) in this study, out of which primary vaginal hydrocele (45%) was the commonest followed by varicocele (13%). Epididymo-orchitis accounted for 9% of the cases out of which 7 were acute epididymo-orchitis due to UTI (*E. coli*, Proteus, Klebsiella). Chronic epididymo-orchitis due to tuberculosis was seen in two.

Keywords: Idiopathic scrotal edema, epididymo-orchitis, streptococcus hemolyticus

Introduction

Scrotal swellings are one of the commonest clinical entities which one comes across in surgical practice. Though the scrotum lies hanging down from the lower abdomen and is easily accessible for self-examination it is pitiable to note that even today we come across some late cases of testicular tumor, which is a curable disease if we come across early [1]. Primary vaginal hydrocele, the commonest scrotal swelling. It is invariably painless and can attain very large size without causing much discomfort to the patient. The mortality from this (due to tapping as a mode of treatment) is unknown now-a-days. Because of its hanging down position and mobility, the scrotum is less liable to traumatic injury, resulting in collection of the blood in the loose areola tissue. The testis usually escapes injury because it is withdrawn into the sub-inguinal pouch by the strong contraction of cremasteric muscle [2] There are multitude of reasons for the scrotum to become swollen ranging from hydrocele the commonest cause, to some rare causes like gumma of the testis or malignant tumors of the epididymis. The scrotum has abundant quantity of sebaceous glands which may become infected and obstructed forming sebaceous cysts. Because of the presence of hair follicles, the scrotum is one of the sites for folliculate (Boil), etc [3]. Because of the close proximity of the testis and epididymis to the urinary system, urinary tract infections can involve them, as also the sexually transmitted diseases causing epididymo-orchitis.

Sometimes scrotum can become swollen without any apparent cause. This condition, known as idiopathic scrotal edema, is thought to be caused by streptococcus hemolyticus and Cl. Welchii. Scrotum can become swollen due to systemic illnesses causing generalized edema, as in congestive cardiac failure (CCF), nephritic syndrome, and cirrhosis of liver and hypoproteinaemic states [4]. In the coastal area, elephantiasis of the scrotum can occur due to infection by the microfilaria, W. Bancrofti, the treatment of which is difficult. Fournier's gangrene of scrotum is a condition thought to be caused by obliterative endarteritis of scrotal vessels with superinfection.

Finally testicular tumors, though forming only 1-2% of the malignancies in the male, are essentially curable. With the knowledge of specific tumor markers, the advances in the field of radiology and the advent of cisplatin combination chemotherapeutic agents, the treatment of testicular tumors has undergone a sea of change with complete remission (disease free state) possible in most of the early cases and good five year survival rates in late cases.

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Also self palpation of testis is being thought of as a screening procedure for early detection of testicular cancers, just like self examination of the breast, in females [5].

Methodology

The 100 cases admitted to the surgical wards in Medical College Hospital and Research Center, formed the material for this study.

The method of study followed consists of;

- Detailed history taking and physical examination.
- Local examination of scrotum and its contents with relevant lymphatic and systemic examination.
- Routine laboratory investigations including examination of hydrocele fluid in some cases.
- Relevant special investigations.
- Surgical treatment according to the merits of the case as decided by the attending surgeon, under suitable anaesthesia.
- Operative findings, post operative course and treatment.
- Post operative complications, histopathological correlation (if any), duration of hospital stay and follow up.

The follow up in these cases was generally poor. The relevant data from the 100 cases was tabulated in a master chart, under different headings.

Results

Table 1: Duration of Symptoms

Duration	Number of cases	Percentage
0-7 days	25	25%
8-30days (upto 1 month)	17	17%
1month-3months	43	43%
4-6months	09	09%
7months-1year	04	04%
> 1 year	02	02%

The duration of symptoms ranged from as early as eight hours in a case of testicular torsion to 2 years in a case sebaceous cyst (case no.94)

Table 2: Side Distribution of Scrotal Swelling

Side affected	Number of cases	Percentage
Right side	31	31%
Left side	49	49%
Bilateral	20	20%

Scrotal swelling was common on left side, i.e. 49% and right side was affected in 31% of the patients. It was bilateral in 20% of patients.

Table 3: Type of Lesion

Diagnosis	Number of cases	Percentage
Hydrocele		
-Primary vaginal hydrocele	45	45%
-Encysted hydrocele of cord	03	03%
Epididymo-orchitis		
Acute	07	07%
Chronic-tubercular	02	02%
Varicocele	13	13%
Torsion of testis	05	05%
Testicular tumor	04	04%
Fournier's gangrene	09	09%
Hernia with hydrocele	02	02%
Scrotal abscess	05	05%
Scrotal abscess with torsion of testis	01	01%
Sebaceous cyst of scrotum	03	03%
Infertility	01	01%

Various types of hydrocele formed the majority of the cases (50) in this study, out of which primary vaginal hydrocele (45%) was the commonest followed by varicocele (13%). Epididymo-orchitis accounted for 9% of the cases out of which 7 were acute epididymo-orchitis due to UTI (*E. coli*, *Proteus*, *Klebsiella*). Chronic epididymo-orchitis due to tuberculosis was seen in two.

There were nine cases of Fournier's gangrene, out of which three cases had a h/o of trauma as a predisposing cause. There were six cases of torsion of testis out of which three cases underwent orchidectomy of the affected side.

There were 4 cases of testicular tumors, All underwent high orchidectomy, and were subsequently diagnosed as seminomas.

There were three cases of sebaceous cysts of scrotum and one case each of scrotal abscess with torsion and infertility.

Discussion

Mackay Baznett in 1958 treated congenital hydrocele by ligating & dividing the processus vaginalis through inguinal route and aspiration of the hydrocele fluid.

Mallace A. F suggested that hydrocele was the result of lymphatic obstruction either due to low grade inflammation of the epididymis or due to trauma to scrotum [6].

Wilkinson (1960) described his operation for large hydrocele.

In 1962, Montella & Fontana tried injection of hydrocortisone into the hydrocele sac after completely aspirating the fluid. postoperative haematoma seemed to be an accepted risk following operation for radical cure of idiopathic hydrocele.

In 1964, Peter H. Lords described the technique of placcation. In 1970, Lord PH described a bloodless operation for spermatocele and epididymal cyst [7].

In 1973, Sharma.LS & Jhavar PK described a simplified minimal dissection technique for hydrocele. the early results of prospective study of sclerotherapy for hydrocele & Epididymal cyst were presented in 1979.

Agarwal O.P (1981) evaluated the efficacy of Lord 's plication over the eversion of sac.

Dubin and Amelar (1977) and Lipshultz and Howards (1983) described the inguinal approach for varicocele repair [8].

George T, Ho. *et al* (1992) did study on endoscopic ablation & concluded new method of treating hydrocele that appears to be effective & well tolerated. It also permits visual inspection of scrotal contents without the post op discomfort.

Keto K., Suzuki K., Sai S., *et al.* (1999) reported a case of metastatic tumor of spermatic cord with hydrocele from gastric cancer. A 70 old patient underwent total gastrectomy & one year later he presented with scrotal swelling with hard nodule in ipsilateral area. A left orchidectomy done & pathological diagnosis was tubular adenocarcinoma [9].

A study done by Dondapet in 1990 showed arrest of spermatogenesis in 10% & total arrest in 8% of cases, remaining 82% showed normal spermatogenesis [10].

Shah *et al*, reviewed 50 cases of ambulatory hydrocele surgery in 1992. In 1995 a study done by Gunandin G *et al.* indicated that fluid within spermatocele & epididymal cyst do not become infected under normal circumstance excision & eversion of the sac has been one of the most widely used procedure for idiopathic hydrocele. Recently Lavelle MA described surgical treatment of cystic swelling of the scrotum done under LA.

Conclusion

There were 6 cases of torsion of testis including one associated with scrotal abscess. Orchidectomy was done in three cases and Orchidopexy was done in the remaining cases.

- There were 09 cases of epididymo-orchitis, out of which 7 were acute in onset and 2 were chronic secondary to tuberculosis. Most of the patients were treated with Antibiotics/ ATT analgesics and scrotal support.
- There were 4 cases of testicular tumor. All were subjected to high Orchiectomy and histopathology turned out to be Seminoma in 3 cases, one showed NHL. One patient received adjuvant chemotherapy and rest were lost during the follow up period.
- There were 3 cases each of sebaceous cyst and encysted hydrocele of cord and two cases of hydrocele associated with hernia.
- There was 1 case of scrotal abscess with torsion testis.
- There was one case of infertility for which testicular biopsy was done to detect defective sperm production, the report for which turned out to be normal.

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