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The Prospective Study of Clinical Evaluation of Scrotal Swelling

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Abstract

Scrotal swellings are a common problem among the men of all ages. The common differential diagnosis includes Hydrocele, Epididymo-orchitis, Epididymal cyst, Torsion, Varicocele, Tumour. The present study has been conducted on fifty patients in Geetanjali medical college and hospital, Udaipur to evaluate the epidemiology and clinical presentation of the scrotal swelling. Prompt clinical examination followed by appropriate imaging is the key to early diagnosis and management. Ultrasound is an important investigation. Incidence of various scrotal swelling is Hydrocele 48%, Epididymo-orchitis 32%, Testicular torsion 4%, Varicocele 4% and Fournier's Gangrene is 8%.

Keywords: Hydrocele; Scrotal Swelling; Torsion; Varicocele.

Introduction

Scrotal swellings are a common problem among men of all ages .Initial Investigation of a swelling may include an ultrasound scan which has a high sensitivity and specificity, particularly for testicular tumour [1].

Hydrocele is a collection of fluid between the visceral and parietal layers of tunica vaginalis around the testes. Other scrotal conditions such as chylocele (collection of chyle in the Tunica vaginalis), hematocele (collection of blood), or a pyocele (collection of pus) may be mistaken for a hydrocele. In these three conditions the transillumination test is negative. Adult hydroceles usually form as a result of imbalance between the secretion and absorption of fluid by Tunica [2].

The first usage of the word Varicocele was by CURLING in 1843. Varicocele is abnormal dilatation of veins within the Pampiniform plexus. Ninety seven percent of Varicoceles are present on left side because of the anatomy of left testicular vein draining into left renal vein perpendicularly [3].

Testicular Tumours are rare, accounting for fewer than one percent of all cancers, they are the most common solid tumours to affect young men aged 15-44 years [4]. Testicular Tumors are treatable, with 97% overall five year survival. 95% are germ cell in origin of which 45% are Seminomas, 50% Non Seminomatous Germ Cell Tumours (NSGCT), 4% Lymphomas and 1% are other rare histological types [5]. Presentation may be with a painless unilateral lump within the testes. Twenty percent present with pain, with symptoms mimicking epididymo-orchitis. Gynaecomastia may be the presenting symptom in 7% as a result of paraneoplastic syndrome. The peak incidence is in the third decade of life form nonseminoma and in the fourth decade for pure seminoma [6].

Ultrasound is both specific and sensitive modality for investigation of testicular tumour [7].

Fournier's Gangrene is defined as polymicrobial Necrotising fascitis of the perineal, perianal, or genital areas. It was first Identified in1883 by Gean Alfred Fournier as a rapid progressive gangrene of penis and scrotum without apparent cause [8,9].

Testicular Torsion is a medical emergency requiring prompt treatment or risking the loss of the Testicle. The incidence is 1 in 4,000 males under the age of twenty five [9].

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Intravaginal torsion occurs when the testicle can freely rotate within the tunica due to failure of posterior anchorage of the Gubernaculum epididimis and testis, thus allowing the testis to freely rotate within it. Extravaginal torsion occur when the Testes rotate within the scrotum owing to inadequate fusion of the testicle to the scrotal wall or increased mobility [10,11].

Epididymitis present with gradually increasing dull unilateral pain. Involvement of the Vas may result in exquisite pain that affect the entire hemiscrotum as well as the spermatic cord. On physical examination a tender and swollen Epididymis and normal cremastric reflex [12].

Scrotal abscess is a rare condition. The most common cause is post neglected testicular torsion or necrotising Epididymoorchitis. Other causes include infection of the hydrocele or tuberculous. A very rare cause is scrotal collection as presentation of acute appendicitis in pediatric age group [13].

Material and Method

The present study has been conducted on fifty patients to study the Scrotal swelling cases admitted in Geetanjali medical college Udaipur from April 2016 to Dec 2017. All the patients with scrotal swelling attending surgical outpatient department and Emergency were examined in detail. A detailed Medical history and finding of clinical 'examination were noted in clinical Performa. All the patients were investigated, ultrasound examination of scrotum was done and patients were treated conservatively or surgically.

Inclusion Criteria

All patients presenting with Scrotal swelling.

Exclusion Criteria

Patients with purely Inguinal swellings and reducible Inguinal hernia.

Results

Table 1: Age distribution of patient

Sr. No.	Age group (yrs)	No. of Patients	Percent (%)
1	0-20	11	22%
2	21-40	23	46 %
3	41-60	12	24 %
4	>60	4	8%

Table 2: Symptoms of the patients

Sr. no.	Symptom	No. of patients	Percent (%)
1	Scrotal swelling	50	100%
2	Pain	38	76%
3	Burning micturition	12	24 %
4	Fever	10	20%
5	Sterility	2	4%

Table 3: Complains to the side of scrotum

Sr. no.	Side	No. of patients	Percent (%)
1.	Right	30	60%
2.	Left	17	34%
3.	Bilateral	3	6%

Table 4: Ultrasound finding suggestive of disease

Sr. no.	Usg.findings	No. of patients	Percent (%)
1	Hydrocele	24	48%
2	Epididymoorchitis	16	32%
3	Epididymal Cyst	1	2%
4	Varicocele	2	4%
5	Torsion testes	2	4%
6	Testicular Tumour	1	2

Table 5: Urine culture and sensitivity in epididymo-orchitis

Sr. No.	Urine culture and sensitivity	No. of patient	Percent (%)
1	Gram +ve	2	12.5%
2	Gram -ve	14	87.5%

Table 6: Incidence of various types of scrotal swellings

Sr. no.	Disease	No. of patient	Percent (%)
1	Hydrocele	24	48%
2.	Epididymoorchitis	16	32%
3.	Epididymal cyst	1	2%
4.	Torsion	2	4%
5.	Varicocele	2	4%
6.	Tumour	1	2%
7	Fourniers gangrene	4	8%

Table 7:

Sr. No.	Treatment	No. of patients	Percent (%)
1	Conservative	16	32%
2	operative	34	68%

Discussion

The Scrotal swelling is usually most common in 2nd and 3rd decade. In the present study, maximum number of cases (23) were found between the age group 20 – 40 years and least patient were found above the age of 60 years (Table 1). The incidence of scrotal swelling is higher during the years of maximum sexual activity (Campbell 1927). In our study also the Maximum number of patients were found in same age group. Testicular torsion is more common in men who are younger than 20 years of age [14]. In our study torsion is also common in same age group.

Scrotal swelling is also associated with many other symptoms. Pain is the most common symptom followed by burning micturition and fever. In our study 38 cases (76%), association of burning micturition is found in cases of epididymo-orchitis. In the present study it was found in 12 (24%) cases and the fever is associated with scrotal swelling in 10 (20%) patients [15].

Small polypoidal appendages are often found attached to the testis or epididymis and are either Mullerian or Wolfian duct remnants. Similar to testis torsion, torsion of the appendix testis or appendix epididymis can also present with acute onset of scrotal pain and mass. If exploration is pursued, the appendage is simply excised and no orchidopexy is needed [16,17].

In our study ultrasound examination of scrotum was done in 46 cases, having 100% sensitivity for diagnosis of the Hydrocele, epididymoorchitis and testicular tumor (Table 4), and has an important role in determining whether the mass is intra or extra testicular.

De Jong and associates (1990) have reported gram negative bacteria were the common organisms causing Epididymoorchitis. They found 10 patients (62.5%) had gram negative infection (37.5%) and one had gram positive infection (8%). In our study 2 (12.5%) patients had gram positive while 14(87.5%) had gram negative infection in epididymo-orchitis (Table-5). The coliform bacteria were most common organism [18,19]. In our study 34 (68%) of the scrotal swelling were treated surgically and rest 16 (32%) cases were treated conservatively. All of the conservatively treated patients were of Epididymo-orchitis.

In present study Hydrocele is the commonest scrotal swelling, and the incidence was (48 %) (Table 6). Similar findings were reported by other authors. The effective treatment of hydrocele is surgery as the minimal invasive therapy like aspiration and sclerotherapy are known to have high recurrence rate and potential damage to the testes due to sclerosant. Several surgical options are available for hydrocele but the recommended operation is hydrocelectomy, i.e. a subtotal excision of the parietal layer of tunica vaginalis leaving a rim of approximately 1 cm width around the testis and epididymis. Lords procedure is also an effective operation for hydrocele [20].

Conclusion

Scrotal swellings are common in 20-40yrs of age group. Torsion is common in younger age group and colour doppler was found to be diagnostic. Hydrocele is more common in adults. Fournier's gangrene was usually associated with Diabetes Mellitus. Ultrasonography is an important investigation in all cases of scrotal swelling. Incidence of various scrotal

swelling in present study is Hydrocele 48%, Epididymoorchitis 32%, Testicular torsion 4%, Varicocele 4% and Fournier's Gangrene is 8%.

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