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A clinicopathological study of scrotal swellings in adults

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Abstract

Scrotal swelling is one of the common problem in all age groups and are commonly encountered in surgical outdoor. In our study 100 patients were included who presented with scrotal swelling in surgical outdoor. Factors such as age, presenting complaint, laterality were analysed, a definite diagnosis was made on the basis of USG and histology. Collected data was then analysed and compared to previous studies. In this study hydrocele forms the most common cause of scrotal swelling consisting of 33%. Next common cause was epididymoorchitis (31%). Other causes include 12% cases of varicocele, 6% cases each of epididymal cyst and scrotal abscess, 5% cases of testicular tumour, 3% cases of sebaceous cyst and testicular torsion each and only 1% of spermatocele.

Keywords: Scrotal swelling, hydrocele, varicocele, seminoma

Introduction

Scrotal swelling is one of the common problems in all age groups and are commonly encountered in surgical outdoor. Wide spectrum of the condition necessitates the importance to find out the most common cause and therefore better understanding for a focused and specialized management of the condition. Management is done by various methods for each type of scrotal swelling, hence the necessity to study the modality of management.

Methods

This retrospective and prospective observational study was conducted in 100 cases of scrotal swellings in a tertiary care hospital. Ethical committee approval was obtained and written informed consent was taken from patients who agreed to participate in study. Particulars of the cases, presenting chief complaints was recorded in chronological order along with history of presenting illness, past history, personal history & family history. General physical examination was done, detailed local examination was recorded followed by systemic examination in every case and among investigations Ultrasonography of abdomen and scrotum was done. Data was analyzed using proportions and presented.

Results

In our study maximum number of cases were observed in the age group 41-50 years (28%), followed by 21-30 (23%) & 31-40 years (19%). Mean age at the time of presentation was 37.8 years. All the patients presented with scrotal swelling. 41(41%) patients had pain, 12(12%) had urinary symptoms & 5(5%) patients complained of fever.

Right sided scrotal swelling was present in 59(59%) patients. Left sided scrotal swelling was seen among 38(38%) while bilateral scrotal swelling constituted only 3% of the total.

Ultrasonography of scrotum was advised in 97 patients and not done in 3 cases of sebaceous cyst. Upon USG screening hydrocele was seen in 33 cases (33.00%), 31 cases were diagnosed with epididymoorchitis (31.00%), varicocele was observed in 12(12.00%), 6(6.00%) cases each of scrotal abscess & epididymal cyst were noted and 5 cases of testicular tumour (5.00%) were encountered. Fine needle aspiration cytology was performed only in cases of epididymoorchitis (31 cases), acute pyogenic epididymoorchitis was seen in 25 cases (80.64%), tubercular epididymoorchitis in 5(16.12%) and only in 1 case (3.22%) tubercular epididymitis was observed. In this study, hydrocele forms the most common cause of scrotal swelling consisting of 33 cases (33%). Next common cause was epididymoorchitis constituting 31 cases (31%)

Other causes include 12(12%) cases of varicocele, 6(6%) cases each of epididymal cyst and scrotal abscess, 5(5%) cases of testicular tumour, 3(3%) cases of sebaceous cyst and testicular torsion each and only 1(1%) case of spermatocele.

In this study, among surgically managed patients of scrotal swelling Lord's plication was done in 33 cases (47.14%) followed by Palomo's operation in 11 cases (15.71%) and varicolectomy for 1 case(1.42%) of recurrent varicocele while Cyst excision was done in 10 cases(14.28%), incision and drainage in 5(7.14%) & high inguinal orchidectomy were performed in 5 cases(7.14%). 3 cases(4.28%) of testicular torsion were managed by orchidectomy with contralateral orchidopexy. Only 1 case (1.42%) underwent epididymectomy. Orchidectomy was done in 1 case (1.42%) of scrotal abscess.

In this study, 45 cases of benign lesions were examined pathologically, in which most common pathological diagnosis was epididymoorchitis (25 cases, 55.55%), next was epididymal cyst in 6 patients(13.33%) and others were tubercular epididymoorchitis 5 cases(11.11%), testicular necrosis 4(8.88%), Epidermal cyst in 3(6.66%), Spermatocele and tubercular epididymitis was reported in 1 case each (2.22%). In this study, among 5 cases of testicular tumour 3 were seminoma (60%) and 2 were diagnosed teratoma (40%) on histopathological examination.

Table 1: Age wise incidence of scrotal swelling

Age (yrs)	No. of patients	Percentage
13-20	13	13.00
21-30	23	23.00
31-40	19	19.00
41-50	28	28.00
51-60	12	12.00
≥61	5	5.00
Total	100	100.00

Table 2: Presenting complaints of patients with scrotal swelling

Chief complaints	No. of patients	Percentage
Swelling	100	100.00
Pain	41	41.00
Urinary symptoms	12	12.00
Fever	5	5.00

Table 3: Side of the swelling

Side	No. of patients	Percentage
Right	59	59.00
Left	38	38.00
Bilateral	3	3.00
Total	100	100.00

Table 4: Ultrasonography findings in patients with scrotal swelling

Radiological diagnosis	No. of patients	Percentage
Epididymoorchitis	31	31.00
Testicular torsion	3	3.00
Scrotal abscess	6	6.00
Hydrocele	33	33.00
Epididymal cyst	6	6.00
Spermatocele	1	1.00
Varicocele	12	12.00
Testicular tumour	5	5.00
Not advised	3	3.00
Total	100	100.00

Table 5: Fine needle aspiration cytology in patients with Epididymoorchitis

Diagnosis	No. of patients	Percentage
Acute pyogenic epididymoorchitis	25	80.64%
Tubercular epididymoorchitis	5	16.12%
Tubercular epididymitis	1	3.22%
Total	31	100.00%

Table 6: Different diagnosis made among patients with scrotal swelling

Diagnosis	No. of patients	Percentage
Epididymoorchitis	31	31.00
Testicular torsion	3	3.00
Scrotal abscess	6	6.00
Sebaceous cyst	3	3.00
Hydrocele	33	33.00
Epididymal cyst	6	6.00
Spermatocele	1	1.00
Varicocele	12	12.00
Testicular tumour	5	5.00

Table 7: Different surgical procedure performed for scrotal swelling

Surgery performed	No. of patients	Percentage
Incision and drainage	5	7.14
Cyst excision	10	14.28
Epididymectomy	1	1.42
Varicolectomy	1	1.42
Palomo's operation	11	15.71
Lord's plication	33	47.14
High inguinal orchidectomy	5	7.14
Orchidectomy with contralateral orchidopexy	3	4.28
Orchidectomy	1	1.42
Total	70	100.00

Table 8: Pathological diagnosis of benign conditions among scrotal swelling patients

Pathological diagnosis	No. of cases	Percentage
Acute pyogenic Epididymoorchitis	25	55.55
Tubercular epididymoorchitis	5	11.11
Epididymal cyst	6	13.33
Testicular necrosis	4	8.88
Epidermal cyst	3	6.66
Spermatocele	1	2.22
Tubercular epididymitis	1	2.22
Total	45	100.00

Table 9: Pathological diagnosis of malignant conditions in patients with scrotal swelling.

Histopathological diagnosis	No of cases	Percentage
Seminoma	3	60.00
Teratoma	2	40.00
Total	5	100.00

Discussion

In our study, maximum number of cases were observed in the age group 41-50 years (28%), followed by 21-30 (23%) & 31-40 years (19%). Mean age at the time of presentation was 37.8 years

In the study conducted by Chauhan A et al (2015) [1], maximum incidence of patients was in the age group of 21-30 years (41%) followed by 31-40(18%) & 41-50 years (13%).

Borah KK et al (2017) [2] found that highest number of cases were in the age group of 31-40 years (29%) followed by 21-30 years (27%).

In this study, right sided scrotal swelling was present in 59(59%) patients. Left sided scrotal swelling was seen among 38 (38%) while bilateral scrotal swelling constituted only 3% of the total.

Our findings are comparable to those of Patel M.B *et al.* [3] who observed right sided scrotal swelling among 59 % cases, left sided in 39% and bilateral scrotal swelling in 2 % of the patients.

In the present study, ultrasonography of scrotum was advised in 97 patients and not done in 3 cases of sebaceous cyst. Upon USG screening hydrocele was seen in 33 cases (33.00%), 31 cases were diagnosed with epididymoorchitis (31.00%), varicocele was observed in 12 (12.00%), 6(6.00%) cases each of scrotal abscess & epididymal cyst were noted and 5 cases of testicular tumour (5.00%) were encountered. Our study compares well with that of Pasoriya S *et al.* [4] who on sonological evaluation of scrotal pathology observed hydrocele in 31.91% cases followed by epididymoorchitis (27.65%) and varicocele (10.63%).

In our study, among 5 cases of testicular tumour, 3 were seminoma (60%) and 2 were diagnosed as teratoma (40%) on histopathological examination. Patel M.B *et al.* (2013) [3] also found 40% cases of seminoma, 33.3% cases of teratoma and 6.6% cases of yolk sac tumour in their study. Moghe K.V *et al.* (1970) [5] observed 41.6% cases of seminoma and 36.4% cases of teratoma in their study.

Conclusion

It can be concluded that scrotal swelling is a common condition found in all age groups with maximum incidence in 3rd to 5th decades of life. Common conditions presenting as scrotal swelling are hydrocele and epididymoorchitis. A thorough clinical examination including per rectal examination is imperative to establish a diagnosis in patients with scrotal swelling. Most of these swellings need to be treated by surgery.

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