

# Different Scrotal Swellings, One Year Clinical Experience In Tertiary Care Of Northeast India

Lipika Sarma<sup>1</sup>, Jishan Ahmed<sup>2</sup>, Darothy Das<sup>3</sup>, Prosperwell War<sup>4</sup>, M Nupur<sup>5</sup>,  
Dibyajit Chakravarty<sup>6</sup>, Geevar Alex<sup>7</sup>

<sup>1,4,5,6,7</sup> junior Resident, <sup>2</sup> Professor, <sup>3</sup> registrar, Department Of General Surgery, Assam Medical College And Hospital, Dibrugarh, Assam, India

## Abstract

**Background** :scrotal swelling is a sign of various pathological conditions including injury, infection or testicular tumour. Acute scrotal swelling is a potential emergency. It is a common problem occurring in almost all age groups in male, but most of them present late due to associated social stigma.

**Aim**: to study the age distribution of the disease in adults, clinical presentation, surgical managements and to evaluate the complications in tertiary care centre of north east india.

**Materials and methods**: a hospital based study was conducted in assam medical college and hospital, department of general surgery amongst the patients coming in opd and emergency with scrotal swelling. A detailed history and examination with prior consent was done along with appropriate investigations such as ultrasonography of bilateral scrotal region with colour doppler study and ct/mri of concerned region wherever necessary. The patients were followed for operative intervention and post operative complication, if any. The data collected was analysed using tables.

**Results**: the study comprised of 70 patients with scrotal swelling with age above 18 years. Majority of them presented with painless scrotal swelling with primary vaginal hydrocele being the most common cause, followed by epididymo orchitis. Most common age group was found to be of 28 to 37 years. Treatment options were conservative or surgical according to the disease condition. Most common post operative complication encountered was pain.

**Conclusion**: 78% of the patients underwent surgical intervention and the rest were managed conservatively. Most of the patients presented with only scrotal swelling with right side being the dominant side.

**Keywords**: scrotal swellings, North East India, surgical interventions, hydrocele

Date of Submission: 03-06-2024

Date of Acceptance: 13-06-2024

## I. Introduction

Scrotal swellings encompass a range of pathological conditions characterised by abnormal enlargement or mass within the scrotal sac. These swellings can arise from various structures within the scrotum, including the testes, epididymis, spermatic cord, and surrounding soft tissues. The etiology of scrotal swellings is diverse, spanning from benign inflammatory processes to potentially life-threatening neoplasms. Common culprits encompass hydrocele, varicocele, epididymal cysts, spermatoceles, testicular torsion, orchitis, and tumours affecting the testes or nearby structures<sup>1</sup>. Clinical presentation varies depending on the underlying pathology but commonly includes palpable mass, scrotal pain or discomfort, swelling, alterations in testicular size or consistency, and associated systemic symptoms like fever or urinary issues. Achieving an accurate diagnosis necessitates a comprehensive clinical history, physical examination, and often imaging studies such as scrotal ultrasound. Management approaches for scrotal swellings hinge on the underlying cause, spanning from conservative measures such as observation and analgesia to surgical interventions for conditions like testicular torsion or neoplastic masses. Timely detection and intervention hold paramount importance, particularly in instances of testicular torsion or malignancy, to safeguard testicular function and enhance long-term outcomes. Given the broad spectrum of potential aetiologies and clinical presentations, a systematic evaluation and management approach for scrotal swellings are imperative. This introduction lays the groundwork for an exhaustive exploration of scrotal pathology, underscoring its clinical significance, diagnostic intricacies, and therapeutic considerations in clinical practice.

## II. Material And Methods

The present study was a retrospective study conducted at the Department of General Surgery, Assam Medical College and Hospital, Dibrugarh, Assam after taking the ethical committee approval. The time period

of study was from April 2023 to April 2024. A written consent was obtained from patients in their local language.

**Study Design:** This is a hospital based retrospective study

**Study Location:** This was a tertiary care teaching hospital based study done in Department of General Surgery, Assam Medical College and Hospital, Dibrugarh, Assam

**Study Duration:** April 2023 to April 2024

**Sample size:** 70 patients

**Inclusion Criteria :**

- Patients with scrotal swelling presenting to the Department of General Surgery, Assam Medical College and Hospital who gave consent for the study.
- Age of patients from 18 years and above.

**Exclusion Criteria :**

- Patients who denied consent for the study.
- Patients with age less than 18 years.
- Patients with inguinoscrotal swelling.
- Patients with lesions involving the wall of the scrotum.

**Methodology**

- Detailed history with prior informed consent.
- General examination.
- Systemic examination.
- Investigations: bilateral inguinoscrotal ultrasonography with colour Doppler, routine laboratory investigations, relevant special investigations in some cases.
- The treatment options were either surgical or conservative.
- Evaluation of preoperative status and appropriate preparation for surgery in cases which require surgical interventions.
- Surgical treatment according to the merits of the cases as decided by the attending surgeon, under suitable anaesthesia.
- Operative findings were evaluated.
- Post operative management and regular monitoring of post operative complications .
- Fluid analysis and histopathological examination in relevant cases.
- Patients were followed up after discharge at 1 week, 2 weeks, 1 month and 3 months.

**Statistical analysis :**

The collected data were categorised and presented in counts (percentage). The significance of statistical data was tested using the chi-square test considering a p-value of <0.05 as statistically significant. Data obtained were analysed using SPSS software.

**III. Result**

**Table 1 : Different Conditions With Scrotal Swelling**

Disease	Number	Percentage
Hydrocele	37	53
Epididymo-Orchitis	12	17
Pyocele	6	8
Epididymal Cyst	2	3
Spermatocele	2	3
Hematocele	2	3
Varicocele	2	3
Testicular Torsion	5	7
Testicular Tumour	2	3
Total	70	100

**Table 2 : Age Distribution**

Age (In Years)	Number	Percentage
18-27	13	18
28-37	25	36
38-47	14	20
48-57	10	14
>58	8	12
Total	70	100

**Table 3: Side Wise Distribution Of Scrotal Swelling**

Side	Number	Percentage
Right	40	58
Left	24	34
Bilateral	6	8
Total	70	100

**Table 4: Age Wise Distribution Of Different Scrotal Swelling**

Age	Hydrocele	Epididymo-Orchitis	Pyocele	Epididymal Cyst	Spermatocele	Hematocele	Varicocele	Testicular Torsion	Testicular Tumour
18-27	8	3	1	1	2	1	0	4	0
28-37	14	3	2	1	0	1	0	1	0
38-47	9	5	2	0	0	0	0	0	0
48-57	3	1	0	0	0	0	1	0	1
>58	3	0	1	0	0	0	1	0	1
Total	37	12	6	2	2	2	2	5	2

**Table 5 : Presenting Features**

Presenting Features	Number Of Cases	Percentage
Only Scrotal Swelling	36	52
Scrotal Swelling + Pain	12	17
Scrotal Swelling + Pain + Fever	10	14
Scrotal Swelling + Pain + H/O Trauma	12	17
Total	70	100

**Table 6 : Management**

Management	Total	Percentage
Surgery	55	78
Conservative	15	22
Total	70	100

**Table 7 : Different Surgical Procedure Employed**

Procedure	Diagnosis	No. Of Cases	Percentage
Jabouley's Procedure	Hydrocele	24	43
Lord's Plication	Hydrocele	10	18

Excision Of Cyst	Epididymal Cyst, Spermatocele	4	7
Incision And Drainage	Pyocele , Hematocele	8	15
Palomo Operation	Varicocele	2	4
Orchidectomy	Testicular Tumour	2	4
Orchidopexy	Testicular Torsion	1	2
Orchidectomy+ Orchidopexy (C/L)	Testicular Torsion	4	7
Total		55	100

**Table 8 : Post Operative Complications**

Procedure	No Of Cases	Pain	Scrotal Edema	Hematoma	Wound Infection
Jabouley's Procedure	24	6	3	1	1
Lord's Plication	10	2	0	0	0
Excision Of Cyst	4	1	0	0	0
Incision And Drainage	8	4	2	0	2
Palomo Operation	2	0	0	0	0
Orchidectomy	2	1	0	0	0
Orchidectomy+Orchidopexy	5	1	0	0	0
Total	55	15	5	1	3
Percentage	100	27	9	2	5

During the study period 70 patients were observed presenting different conditions with scrotal swelling(table 1). Out of these 70 patients 37(53%) presented with hydrocele, 12(17%) presented with epididymo orchitis, 6(8%) presented with pyocele and 5(7%) presented with testicular torsion. Epididymal cyst, spermatocele, hematocele, varicocele and testicular tumour presented with 2 patients(3%) each. Most of the patients with scrotal swelling found to be in the age group of 28-37 years (table 2) with 25(36%) no of patients. 40(58%)cases were found to be right sided and 24(34%) cases were left sided. Only 6(8%) cases were found to be bilateral in the study(table 3). Testicular torsion was found to be more in the younger age group(18-27 years) while testicular tumour was found to be more in the older age group(48 years and above)(table 4). Out of the total cases 36(52%) cases presented with only scrotal swelling, 10(14%) cases presented with scrotal swelling with pain and fever, 12(17%) cases presented with scrotal swelling with pain and another 12(17%) cases presented with scrotal swelling with pain and history of trauma(table 5). Out of the 70 cases 55(78%) cases were managed surgically and 15(22%) cases were managed conservatively(table 6). Jabouley's procedure was the most common procedure employed in 24(43%) of cases followed by Lord's plication in 10(18%) cases. Other operative procedures were excision of cyst, incision and drainage, palomo operation, orchidectomy, orchidopexy and orchidectomy with contralateral orchidopexy were done for epididymal cyst and spermatocele, pyocele and hematocele, varicocele, testicular tumour and testicular torsion respectively(table 7). Out of the total cases which were operated most common post operative complication were found to be pain in 15(27%) cases, followed by scrotal edema in 5(9%) cases, wound infection in 3(5%) cases and hematoma in 1(2%) cases(table 8).

#### IV. Discussion

The study included 70 patients with scrotal swellings. The data collected from the study was compared with the available literature. Majority of the patients in the present study belonged to the age group of 28-37 years. It was compared with the study conducted by Singh et al.<sup>2</sup> on management of cystic swellings of the scrotum, where most of the patients belonged to the age group of 31-40 years. Majority of the patients presented with right-sided swelling. This result was similar to the study conducted by Pawar U et al.<sup>3</sup>. 52% of the patients in the study presented with painless swelling of the scrotum. Similar findings were noticed in the study conducted by H.R. et al.<sup>4</sup> Primary vaginal hydrocele was found to be more common in the age group of 28-37 years which is supported by the study of Munda VS et al.<sup>5</sup> where hydrocele was more common in the age group of 31-40 years. Natalie Hicks<sup>6</sup> performed a study to assess the complications of elective benign scrotal surgery

where wound infection was found to be the most common post-operative complication whereas it was pain in the present study.

## **V. Conclusion**

Scrotal swelling is a common problem occurring in almost all age groups in male, but most of them present late due to associated social stigma and embarrassment. Good hemostasis, minimal handling of tissues, proper antibiotic coverage in the post-operative period, regular antiseptic dressing and the use of scrotal support helps in reducing the post-operative complications to a great extent. Most of the patients belonged to rural set-ups and majority of them didn't come for follow-up due to illiteracy and ignorance. Public awareness and early treatment can decrease morbidity related to diseases causing scrotal swelling.

## **References**

- [1] Carmignani, L. (2017). Scrotal Diseases. In Ferrara A., Carrera S. (Eds.), *Emergency Urology* (Pp. 419-433). Springer.
- [2] Singh J, Singh Ap. Surgical Treatment Of Cystic Swellings Of Scrotum And Its Management: A Clinico-Pathological Study. *Asian Journal Of Medical Research*. 2019;8(1).
- [3] Pawar U, Gubbi S. Clinical Evaluation And Management Of Scrotal Swelling. *Int Surg J*. 2021 Dec;8(12):3601-3605.
- [4] H.R Y, G Ln, N N, R Mm, T. M. M. "A Clinicopathological Study And Surgical Management Of Cystic Swellings Of Scrotum In Rural Hospital." *Journal Of Evolution Of Medical And Dental Sciences*. 2013;2(17):2776-85.
- [5] Munda Vs, Murmu Nn, Kumar S, Bhengra A, Korah Mk, Kumar R. Clinical Profile Of Scrotal Swellings In Jharkhand, India: Our Experience Of Four Rural Health Camps. *Int J Community Med Public Health*. 2017;5(1):244.
- [6] Hicks N, Gupta S. Complications And Risk Factors In Elective Benign Scrotal Surgery. *Scandinavian Journal Of Urology*. 2016;50(6):468-71.