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A Study of Management of Hydrocele in the Surgery Department

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ABSTRACT:

Background: We aimed to study the management of hydrocele for the patients in the surgery department. **Methodology:** This was a retrospective study of patients who had been diagnosed with hydrocele. **Results**: In our study of 30 patients, 73% were male and 50% were aged 50–60 years. The most common procedure was incision and drainage (43%), with antibiotics used pre- and post-operatively mainly for surgical prophylaxis. **Conclusion:** As a result, among the 30 patients studied, the predominant procedure performed was Incision and Drainage.

Keywords: Hydrocele, Antibiotics, Hydrocelectomy**.**

1. INTRODUCTION:

A hydrocele is a fluid accumulation between the layers of the tunica vaginalis surrounding the testis. Congenital hydrocele arises due to the failure of the processus vaginalis to close during fatal development, maintaining a patent connection between the peritoneal cavity and the scrotum [1]. This persistent communication permits fluid passage into the scrotal sac, leading to hydrocele formation [2].

1.1 Hydrocelectomy: To reach the hydrocele sac, a scrotal incision is made during this surgical technique. Depending on the type of hydrocelectomy, the sac is either completely or partially removed after the fluid is drained. For hydrocelectomy, there are four typical surgical techniques available that are Plication (Lord's Procedure) which minimally invasive techniques are effective for thin-walled hydroceles, offering reduced risk of complications such as infection and haematocele due to limited dissection. Excision and Eversion (Jaboulay's Procedure) which are preferred for large or thick-walled hydroceles and chyloceles that allows effective fluid control while preserving critical testicular structures [3]. Aspiration and Sclerotherapy which is a non-surgical option with high recurrence rates that are suitable primarily for patients unfit for surgery or seeking temporary relief. Incision and Drainage (I&D) which is primarily indicated for infected or complex fluid collections and not a definitive treatment for non-infected hydroceles [5,6]. Excision Surgery (Sac Removal) which provides definitive resolution by removing the pathological sac, thereby addressing the underlying cause and minimizing recurrence [4]. Clarification on Jaboulay Procedure (Hypospadias) which is important to distinguish the Jaboulay operation for hydrocele from the similarly named procedure used in hypospadias repair, as they involve different anatomical and clinical considerations [3]. The primary objective is to study the management of hydrocele for the patients in the surgery department.

2. AIMS AND OBJECTIVES:

To study the management of hydrocele for the patients in the surgery department.

3. METHODOLOGY:

3.1 STUDY SITE:

The study was conducted in department of surgery at Government Cuddalore Medical College and Hospital (RMMCH), Annamalai University, Annamalai Nagar, Tamil Nadu which is 1200 bedded multi-speciality rural tertiary care teaching hospital.

3.2 STUDY PERIOD:

6 months (January 2024 to June 2024).

3.3 STUDY TOOLS:

Data collection form.

3.4 STUDY DESIGN:

Retrospective study

3.5 SOURCE OF DATA:

Case sheets.

3.6 STUDY RECRUITMENT:

The study method involves the enrolment of patients based on inclusion and exclusion criteria.

3.7 INCLUSION CRITERIA:

The inclusion criteria are met by patients diagnosed with hydrocele of any form and those admitted to the surgery department.

3.8 EXCLUSION CRITERIA:

The exclusion criteria include patients who are hospitalized to intensive care units, elderly patients who are above 80 years of age, paediatric patients who are between the ages of 0 and 12, and the subject who declined to participate in the study.

3.9 SAMPLE SIZE: 30

3.10 STUDY PROCEDURE:

Period will be conducted for 6 months. Study Proforma (Data collection form) is designed to collect all the details about the management. The collected data was analysed using suitable descriptive statistical tools. The net result of the treatment had recorded and tabulated. An Excel sheet made with Microsoft was used to record each result.

4. RESULTS:

Table 1. Gender wise distribution:

S.NO	GENDER	NO OF PATIENTS	PERCENTAGE
1	Male	22	73%
2	Female	8	27%

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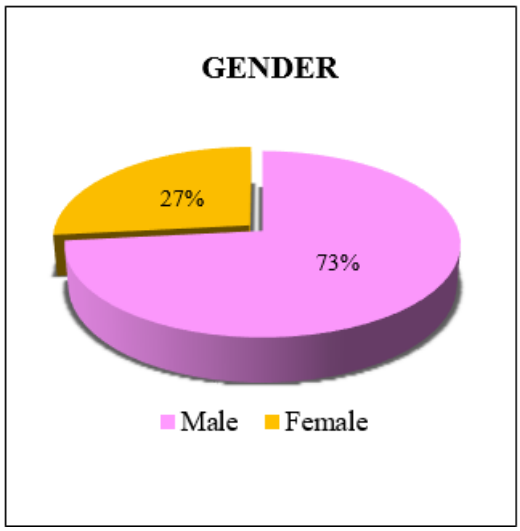

Figure 1: the above pie chart demonstrates the gender of the patients

Out of 30 patients, there is a higher proportion of male patients (73%) compared to female patients.

Table 2. Age wise distribution:

S.NO	AGE	NO OF PATIENTS	PERCENTAGE
1	40-50	5	17%
2	50-60	15	50%
3	60-70	10	33%

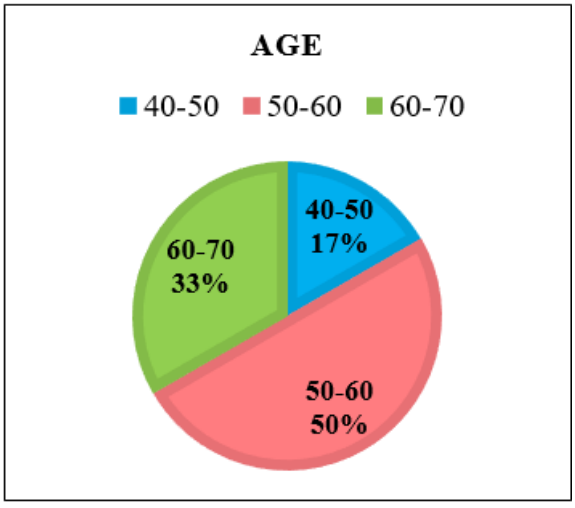

Figure 2: the above pie chart represents the age distribution of the patients

Our study shows that majority of the patients enrolled in the age group of 50-60 (50%), followed by 40-50 (17%) and 60-70 (33%).

Table 3. Surgical management among the hydrocele patients:

S.NO	TYPES OF SURGERY	NO OF PATIENTS	PERCENTAGE
1	Lord's plication with scrotoplasty	8	27%
2	Eversion of sac	4	13%
3	Jaboulay procedure and excision of sac	5	17%
4	Incision and drainage	13	43%

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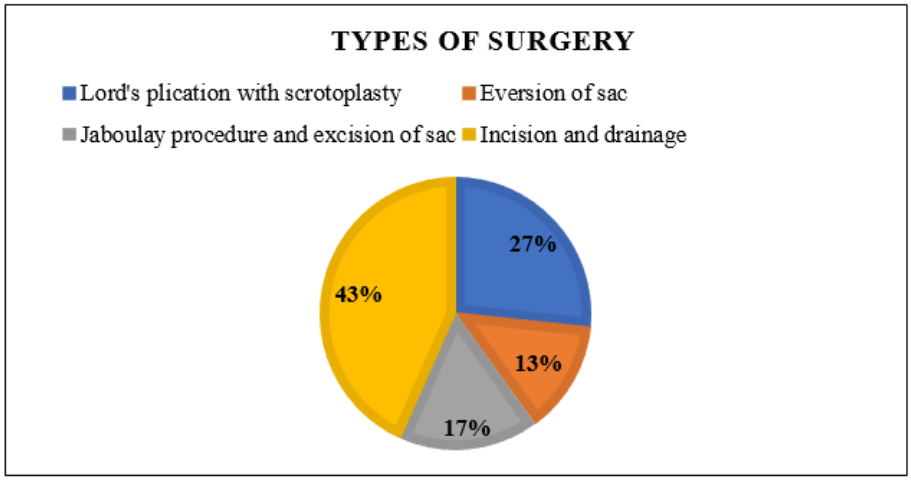

Figure 3: types of surgery done on patients

Out of 30 patient majority of the patients specifically 13 (43%) patients have done Incision and drainage, followed by Lord's plication with scrotoplasty (27%), Eversion of sac (13%) and Jaboulay procedure and excision of sac (17%).

Table 4. Preoperative management:

S.NO	CLASS OF DRUGS	TOTAL NO OF DRUGS	PERCENTAGE
1	ANTIBIOTICS	132	32%
2	ANTACIDS	60	14%
3	NSAID	40	10%
4	ANTIINFLAMMATORY	30	7%
5	VITAMIN SUPPLEMENTS	80	19%
6	ANTIPARASITIC AGENTS	17	4%
7	OPIOID ANALGESICS	60	14%

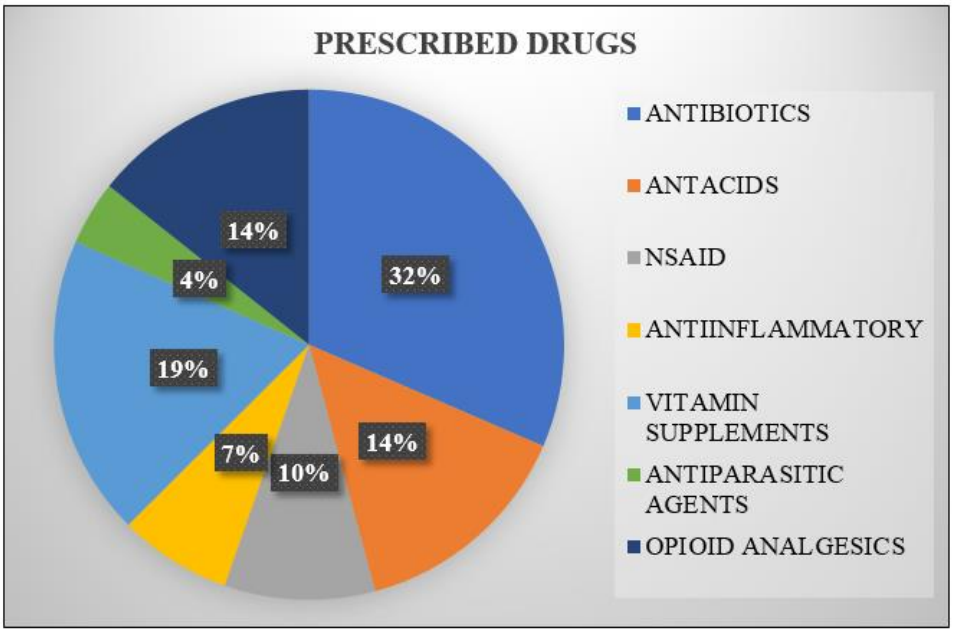

Figure 4: this pie chart demonstrates the preoperative prescribed drugs for the patient

The pre operative management includes Antibiotics (32%) which are majorly given for surgical prophylaxis followed by Antacids (14%), NSAID (10%), Anti-inflammatory (7%), Vitamin supplements (19%), Antiparasitic agents (4%) and opioid analgesics (14%).

Table 5. Post operative management:

S.NO	CLASS OF DRUGS	TOTAL NO OF DRUGS	PERCENTAGE
1	ANTIBIOTICS	180	36%
2	ANTACIDS	70	14%
3	NSAID	47	10%
4	ANTIINFLAMMATORY	45	9%
5	VITAMIN SUPPLEMENTS	80	16%
6	OPIOID ANALGESICS	75	15%

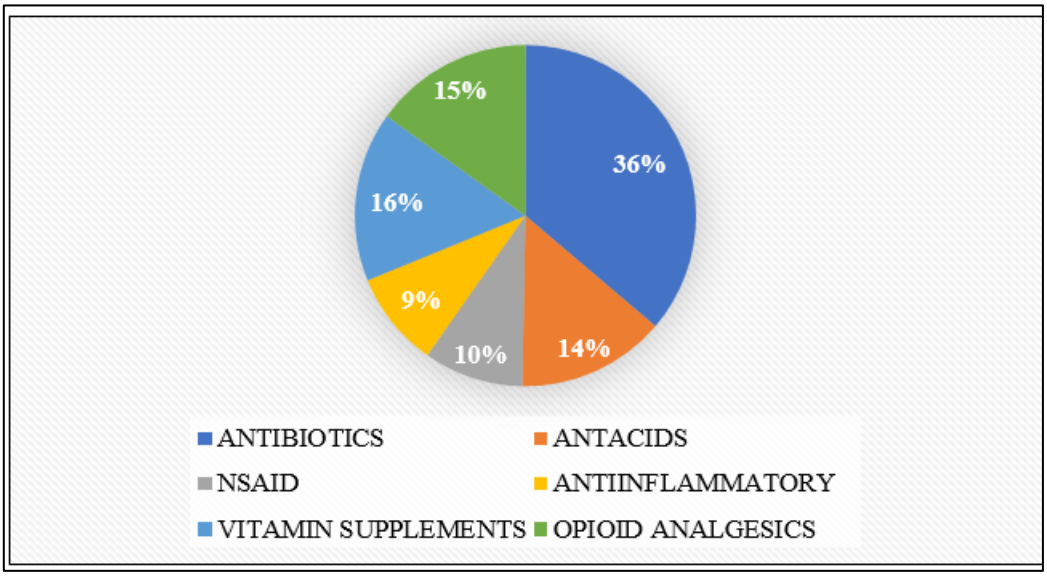

Figure 5: this pie chart demonstrates the post operative prescribed drugs for the patient

The post operative management includes Antibiotics (36%) which are majorly given for surgical prophylaxis followed by Antacids (14%), NSAID (10%), Anti-inflammatory (9%), Vitamin supplements (16%) and opioid analgesics (15%).

5. DISCUSSION:

In a cohort of 30 patients, a notable predominance of male participants (73%) was observed compared to female patients. The majority of enrollees fell within the age bracket of 50-60 years (50%), with lesser proportions in the age groups of 40-50 (17%) and 60-70 (33%). Among the treatment modalities, Incision and Drainage emerged as the most frequently performed procedure, accounting for 43% of cases, followed by Lord's plication with scrotoplasty (27%), Eversion of sac (13%), and Jaboulay procedure with excision of sac (17%). Preoperative management primarily involved the administration of antibiotics (32%) for surgical prophylaxis, supplemented by antacids (14%), NSAIDs (10%), anti-inflammatory drugs (7%), vitamin supplements (19%), antiparasitic agents (4%), and opioid analgesics (14%). Postoperative care predominantly encompassed the continuation of antibiotic therapy (36%) for prophylactic purposes, alongside the utilization of antacids (14%), NSAIDs (10%), anti-inflammatory agents (9%), vitamin supplements (16%), and opioid analgesics (15%).

6. CONCLUSION:

As a result, among the 30 patients studied, the predominant procedure performed was Incision and Drainage, with 13 patients undergoing this treatment. Following closely were cases of Lord's plication with scrotoplasty, Eversion of sac, and Jaboulay procedure with excision of sac. Preoperative management primarily focused on the administration of antibiotics for surgical prophylaxis, followed by the provision of antacids, NSAIDs, anti-inflammatory drugs, vitamin supplements, antiparasitic agents,

and opioid analgesics. Similarly, postoperative care emphasized the continuation of antibiotic therapy for prophylactic purposes, alongside the use of antacids, NSAIDs, anti-inflammatory agents, vitamin supplements, and opioid analgesics.

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Conflict of Interest Statement: All authors have nothing else to disclose.