

Study on Clinical Profile and Surgical Management of Cases of Primary Vaginal Hydrocele

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Abstract

Background: Hydrocele is one of the common surgical conditions seen in tropical countries. The present study was conducted to assess the clinical profile and outcomes of surgical management of primary vaginal hydrocele. **Subjects and Methods:** The present hospital based cross-sectional study was done on patients with scrotal swelling incorporating the testis and positive for transillumination. Detail history of the illness, clinical examination and laboratory investigations were recorded. **Results:** Most of the patients presented within one year. Right side was commonly involved. Post-operative pain and scrotal edema were the complications commonly seen. **Conclusion:** Post-operative pain was the most common complication followed by edema and hematoma.

Keywords: Hydrocele, Profile, Surgical outcome.

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Introduction

Hydrocele is one of the commonest surgical problems where filariasis is common. It causes discomfort to the patient as well as psychological stress and social inconvenience.^[1] Primary vaginal hydrocele is abnormal accumulation of serous fluid in tunica vaginalis.^[2] Surgical management is the preferred modality and involves basic techniques like Lord's plication and Jaboulay's eversion of the sac.^[3,4]

Hydrocele surgery is associated with post-operative complications like scrotal edema and hematoma.^[5,6] Meticulous care and adequate follow-up is needed for its proper management.^[7] As hydrocele is common surgical condition in this area, the present study was conducted to provide proper insight about profile of cases and outcome of surgical management.

Aims & objectives

The present study was conducted to assess the clinical profile and outcomes of surgical management of primary vaginal hydrocele in adults reporting to Katihar Medical College.

Subjects and Methods

The present study was hospital based observational in nature conducted at the department of Surgery, Katihar Medical College, Katihar. The patients presenting to the

OPD with scrotal swelling incorporating the testis and positive for transillumination were included in the study who were

diagnosed to have primary vaginal hydrocele.

Those in whom there was associated impulse on coughing and reducibility were excluded. In all the cases, routine investigations were done which included hemogram, random blood sugar, blood for TC, DC, ESR, scrotal ultrasound. The patients underwent surgery under spinal anaesthesia and were selected to undergo Lord's plication or Jaboulay's procedure depending on the size of the hydrocele sac. The patients were monitored for immediate and late complications, including edema of scrotum, development of hematoma, surgical site infection and recurrence.

Pretested proforma was used for data collection. Detail history of the illness, clinical examination and laboratory investigations were recorded. The details of operation and development of post operative complications were noted. All the data was entered in Microsoft Excel and analyzed using SPSS v 16.0. The results were summarized as frequency & percentage and Mean & SD. Appropriate statistical tests were done. Informed consent was taken in all the cases.

Results

Table 1: Age distribution of the cases.

Age (in years)	Number (n=78)	%	95% CI
<20	5	6.4	2.8-14.1
21-30	11	14.1	8.1-23.5
31-40	26	33.3	23.9-44.4
41-50	23	29.5	20.5-40.4
>50	13	16.7	10-26.5

The present study included 78 cases of primary vaginal hydrocele admitted in the department during the data collection period. [Table 1] shows that majority of cases were in the age group of 31-40 years (33.3%).

[Table 2] shows that in most of the patients, the duration of scrotal swelling was less than one year.

Table 2: Duration of scrotal swelling.

Duration (in years)	Number (n=78)	%	95% CI
<1	30	38.5	28.4-49.6
1-5	27	34.6	25-45.7
>5	20	25.6	17.3-36.3

[Table 3] shows that right side was involved in 42.3% cases, left side in 37.2% and it was bilateral in 20.5%.

Table 3: Side involved

Side	Number (n=78)	%	95% CI
Right	33	42.3	32-53.4
Left	29	37.2	27.3-48.3
Bilateral	16	20.5	13-30.8

[Table 4] shows that Jaboulay procedure was done in 67.9% and Lord's procedure in 32.1%.

Table 4: Surgery performed.

Surgery	Number (n=78)	%	95% CI
Jaboulay	53	67.9	57-77.3
Lord's	25	32.1	22.7-43

[Table 5] shows that post-operative pain was seen in 35.9%, scrotal edema in 23.1%, hematoma in 7.7% and surgical site infection in 3.8%.

Table-5: Post-operative complications seen

Post-operative complications	Number (n=78)	%	95% CI
Pain	28	35.9	26.1-47
Hematoma	6	7.7	3.6-15.8
Infection	3	3.8	1.3-10.7
Edema	18	23.1	15.1-33.6

Discussion

78 cases of primary vaginal hydrocele were included. Majority of cases were in the age group of 31-40 years (33.3%). NagaMuneiah et al found that the youngest patient was 17 years old and the oldest was of 78 years. 23.3% patients were in the age group of 31-40 years.^[8] Kumar et al observed that the youngest patient was a 4 years child and the oldest being 76 years. More than 40% cases were seen in the age group of 31 – 40 years.^[9] Ahmed et al also found that the youngest patient was 16 years old while the oldest patient was 75 years of age with maximum number of cases

seen in 20 - 29 years age group followed by that in 30 - 39 year age group while minimum number of cases were seen in 70 – 79 years age group.^[10]

In most of the patients, the duration of scrotal swelling was less than one year. NagaMuneiah et al found that 41.6% patients had the duration of scrotal swelling of less than one year.^[8] Kumar et al observed that the duration of the swelling was 1-2 years in 46% cases, followed by 6-12 months in 29%.^[9] Ahmed et al also found that the shortest duration for which the cases carried the hydrocele before being treated was 6 days and the longest was 20 years. Maximum number of cases had duration of 6 months or less while minimum number of cases had duration between 6 and 10 years.^[10]

Right side was involved in 42.3% cases, left side in 37.2% and it was bilateral in 20.5%. In the study done by Kumar et al, swelling in right scrotum was seen in 53% cases, compared to 26% patients with the left scrotal swelling and bilateral scrotal swellings in 21% cases.^[9] In the study done by Ahmed et al, hydrocele was found to occur more on the right side (55%) than on the left side (26.67%). Bilateral hydrocele was seen in 18.33%.^[10] Hydrocele was predominant on right side in the study done by NagaMuneiah et al also.^[8]

Jaboulay procedure was done in 67.9% and Lord's procedure in 32.1%. Kumar et al performed Jabouley's eversion of sac for primary vaginal hydrocele in 36% cases with a large and tense swelling with thin sac. Partial/subtotal excision and eversion of sac was done for bigger hydroceles with thick sac.^[9] Jaboulay repair was performed in 80% patients and Lord's plication was performed in 20% patients by Ahmed et al.^[10]

Post-operative pain was seen in 35.9%, scrotal edema in 23.1%, hematoma in 7.7% and surgical site infection in 3.8%. Kumar et al reported that post operatively pain was noticed in almost all cases; In Lords Plication, it was comparatively less. Scrotal edema was observed in 19% cases. Scrotal edema was least following Lord's Plication when compared to other conventional techniques. Haematoma was observed in 15% of the cases and it was seen following Jabouley's and subtotal excision of sac, whereas no haematoma was observed in Lord's plication and herniotomies.^[9] Ahmed et al found that post-operative pain was more in bilateral hydrocele while wound infection and skin oedema was more common in unilateral hydrocele, possibly due to larger size of unilateral hydrocele.^[10]

Conclusion

Maximum number of patients was seen in the age group of 31 – 40 years. Most of them presented within one year of development of scrotal swelling. Right side was involved in most of the cases. Post-operative pain was the most common complication followed by edema and hematoma. Lord's plication was found to be easier and less time consuming compared to Jaboulay's procedure.

References

1. Babu BV, Mishra S, Nayak AN. Marriage, Sex, and Hydrocele: An Ethnographic Study on the Effect of Filarial Hydrocele on Conjugal Life and Marriageability from Orissa, India. *PLoS Negl Trop Dis*. 2009 April; 3(4): e414.
2. Jayakarthik Y, Patil MB. Comparative Study of Efficacy of Injection Sclerotherapy versus Surgery as Primary Modality Therapy in Primary Vaginal Hydrocoele: A Randomised Control Study. *Journal of Evolution of Medical and Dental Sciences* 2015; 4 (09): 1405-13.
3. Lord P.H. A bloodless operation for the Radical Cure of Idiopathic hydrocele. *British Journal of Surgery*. 1964; 51: 914-16
4. Olumi FA, Richie PJ. Urologic surgery. Chap 77. Section XIII. Sabiston textbook of surgery. 18th edition. Vol 2; 2008: 2272-73
5. Das S. A Practical Guide to Operative Surgery. 3rd edition. 1995:489-90.
6. Rintoul RF. Churchill Livingstone, Farquharson's Operative Surgery. 8th edition. 1995:678-80.
7. Tariel E, Mongiat-Artus P. Treatment of adult hydrocele. *Ann Urol (Paris)*. 2004 Aug; 38 (4): 180-5.
8. NagaMuneiah S, Naik BB, Sabitha P, Prakash GV. A comparative study of clinical presentation, surgical procedures and complications of primary vaginal hydroces. *IOSR Journal of Dental and Medical Sciences* 2015 ; 14(10-II): 10-22.
9. Kumar SK, Sasikumar J, Seetharamaiah T, Ajay Kumar B, Venugopalacharyulu NCH. Cystic swellings of scrotum: management. *Int J Med Res Health Sci*. 2014;3(2):338-341
10. Ahmed MHS, Bankar SS, Gosavi VS, Dalavi SB, Gurav PD. Clinical profile and surgical management of primary vaginal hydrocele: our experience in a rural India. *Int Surg J* 2017;4:1653-6.

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