

## Clinical Profile of Patients with Hydrocele

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### Abstract

*Introduction:* Hydroceles may differ in size but most of the cases are asymptomatic. Acquired hydroceles are usually developed gradually and are not that much alarming. Larger hydroceles may result in chronic pain in the scrotum or lower back and can cause injury to the scrotal contents such as the testicle. *Methodology:* The patients who presented in the OPD with a swelling in the scrotum were identified and following inclusion and exclusion criteria applied. All men with primary vaginal hydrocele with no signs of hernia or other scrotal disease will be selected. A total of 60 patients were selected for the study. *Results:* The youngest patient was 11 years of age while the oldest patient is 75 years of age. Maximum number of cases was seen in 20 - 29 years age group followed by that in 30-39 year age group while minimum no of cases were seen in 70 - 79 years age group. *Conclusion:* In this study almost equal number of cases were seen in most of the occupations. This indicates that hydrocele does not have any predilection for a particular occupation.

**Keywords:** Hydrocele; Tunica Vaginalis; Clinical Profile.

### Introduction

Abnormal collection of serous fluid between the visceral and parietal layers of the tunica vaginalis is termed as hydrocele. It is the commonest reason for painless scrotal swelling and affects about 1% of men, mostly above forty years of age, and 4.7% neonates. A

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hydrocele is an abnormal collection of fluid, usually serous, in the sac of the tunica vaginalis. It represents the most common complication after varicocele surgery [1]. It is common in newborn males. Most hydroceles in newborns are harmless and will resolve on their own by 12 months of age. The causes of hydroceles that develop in children are different from those in adults. The testicles initially develop in the abdomen. In most boys, they move down into the scrotum before birth. As they do this, some of the lining of the abdomen comes down as a sack containing the testicle [2]. In most boys, the sack's connection to the abdomen is closed at birth, but in some boys it remains open. Hydroceles may differ in size but most of the cases are asymptomatic. Acquired hydroceles are usually developed gradually and are not that much alarming. Larger hydroceles may result in chronic pain in the scrotum or lower back and can cause injury to the scrotal contents such as the testicle [3]. Communicating hydrocele may be of small size each morning but grow bigger all over the day as the patient is upright. The marked feature on physical examination is a smooth, tense, scrotal mass that trans-illuminates easily. This can help distinguishing a hydrocele from a hernia or a mass, solid in nature. Communicating hydrocele might be present with indirect inguinal hernia. To assess the mass, the whole surface of testes should be palpated. If a thorough examination of the scrotal structures is prohibited by a size of the hydrocele or it does not trans-illuminate fully, then ultrasound can exclude testicular tumour as cause [4].

### Methodology

The patients who presented in the OPD with a swelling in the scrotum were identified and following inclusion and exclusion criteria applied.

*Inclusion Criteria*

- a) Solitary swelling in the scrotum incorporating the testis.
- b) The swelling should be positive for transillumination.
- c) It should be possible to get above the swelling at the base of the scrotum.

*Exclusion Criteria*

Swelling in which there was associated impulse on coughing and reducibility.

All men with primary vaginal hydrocele with no signs of hernia or other scrotal disease will be selected. A total of 60 patients were selected for the study.

Of the 60 patients 50 patients were subjected to open surgeries like Lord's plication, Jaboulay's procedure and Radical excision of the sac. The patients were monitored for immediate and late complications, focusing on scrotal edema, hematoma, infection and recurrence using the following criteria:

Scrotal edema - any degree of scrotal wall swelling with loss of normal rugae.

Hematoma - any visible or palpable collection of blood.

Infection - any evidence of inflammation of the scrotal wound with induration, erythema, increased temperature and exudation.

Recurrence - any visible or palpable fluid collection that appears and persists 3 months post-operatively.

The remaining 10 patients who were either elderly above 60 yrs, or not fit for surgery, or who refused surgery were subjected to Aspiration and Sclerotherapy with 500mg of tetracycline diluted in 5ml of 0.9% saline as described by Bodker et al. The procedure was performed on outpatient basis and the patients discharged after 1hr of observation. All patients were seen 2, 6, 12 weeks and 6 months after treatment.

Both the groups of patients who underwent Surgical procedure and Aspiration Sclerotherapy were compared with respect to patient satisfaction, complication and comparative costs.

A proforma was filled up from the admission day until the patient was discharged and through follow-up period.

**Results**

All the patients presented with swelling in the scrotum. Some complained of heaviness of scrotum or dull aching pain. Few had difficulty during walking/ running or sexual act due to mechanical interference

Majority of patients presented with classical signs of hydrocele. Most of the swellings were oval or globular in shape.

In most cases the median raphe was deviated to the opposite side. Scrotal rugosity lost in bigger hydroceles. Most hydroceles were tensely cystic and fluctuant. 42 cases were primary hydrocele and 18 cases were secondary hydrocele.

**Table 1:** Shows the incidence of hydrocele in various age groups

Age group in Years	No. of Patients	Percentage
10 - 19	6	10.00
20 - 29	15	25.00
30 - 39	14	23.33
40 - 49	8	13.33
50 - 59	8	13.33
60 - 69	5	8.33
70 - 79	4	6.67
80 & above	0	0.00

The youngest patient was 11 years of age while the oldest patient is 75 years of age. Maximum number of cases were seen in 20 - 29 years age group followed by that in 30-39 year age group while minimum no of cases were seen in 70 - 79 years age group.

In this study almost equal number of cases were seen in most of the occupations. This indicates that hydrocele does not have any predilection for a particular occupation.

**Table 2:** Shows the types of occupation in the group of patients studied

Sl. No.	Occupation	No. of cases	Percentage
1	Labourers	11	18.33
2	Business	9	15.00
3	Farmers	11	18.33
4	Students	13	21.67
5	Teachers	7	11.67
6	Private workers	9	15.00

**Table 3:** Shows the duration for which the patients carried the hydrocele

Duration	No. of cases	Percentage
0 - 6mths	22	36.67
6mths -1yr	13	21.67
2 - 3 yrs	12	20.00
4 - 5 yrs	5	8.33
6 - 10 yrs	3	5.00
10 yrs & above	5	8.33

**Table 4:** Shows the side of the testis involved by the hydrocele

Side	No. of cases	Percentage
Right	33	55.00
Left	16	26.67
Bilateral	11	18.33

Shortest duration of the cases treated in the present study was 6 weeks 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.

In the present study hydrocele was to occur more on the right side than leftside. Bilateral hydrocele was seen in 11 cases.

### Discussion

The following tables show the comparison of the present study with the previous studies with respect to various important components.

This table shows that the hydrocele occurs in the 20-39 years age group which is similar to that of the

**Table 5:** Shows the comparison of age incidence in percentage

Age group in years	Present study	Campbell study <sup>5</sup>
0 - 9	0	2
10 - 19	10	7
20 - 29	25	25
30 - 39	23	15
40 - 49	13	18
50 - 59	13	16
60 - 69	8	6
70 - 79	7	1
80 & above	0	0

**Table 6:** Shows the comparison of duration of hydrocele

Duration (% age)	Present study (% age)	Campbell study <sup>5</sup>
0 - 6 mths	37	31
6 mths - 1 yr	22	14
2 - 3 yrs	20	25
4 - 5 yrs	8	9
6 - 10 yrs	5	10
10 yrs & above	8	11

Campbell's study of 502 cases. With this it can be concluded that hydrocele usually occurs in the age

group of 20 - 39 years.

Above table shows that in the present study that a

maximum of 37% of patients carried the hydrocele for 0-6 months. This is similar to that of the Campbell where 31% of patients carried the hydrocele for 0 - 6 months. With this it can be concluded that the majority of patients get operated within 6 months of developing hydrocele.

Above table shows that in both the present study and Campbell study hydrocele occurs more on the right side than on the left side. It can be concluded that the hydrocele has predilection to affect the right side than the left side.

**Table 7:** Shows the comparison of the side of involvement of hydrocele

Side (% age)	Present study (% age)	Campbell study <sup>5</sup>
Right	55	50
Left	27	41
Bilateral	18	9

### Conclusion

- ◆ Maximum number of patients (44%) was in the age group of 20 - 39 yrs.
- ◆ Most of the patients came to medical care within 6 months of development of hydrocele. Right sided hydroceles were more common.

### References

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