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# A prospective study comparing advantages of putting drain to no drain in patients undergoing simple elective hydrocele repair

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### Abstract

**Introduction:** Hydrocele is defined as abnormal collection of serous fluid in some part of Processus vaginalis, usually in tunica. It is a very common problem all over world. Requires operative procedure for cure. There are various operative methods for treatment of hydrocele. The common problem which comes to surgeons mind while closing scrotal wound is to put a drain or not. Drains are believed to prevent scrotal haematoma and thus wound infections. Our study was done with the aim of comparing advantages of putting routine scrotal drains to no drains in affecting surgical outcome.

**Materials and methods:** A study was carried out on 60 patients of idiopathic primary hydrocele attending department of surgery at HIMS Varanasi between January 2020 to september2021. Patients were divided into two groups. In group A, which included 30 patients drain was kept and in group B, which included 30 patients no drain was kept.

**Summary:** The study consisted of operative treatment of primary hydrocele by eversion of sac. After eversion of sac, in one group drain was kept and in another group, no drain was kept. Both groups than assessed for post-operative pain, haematoma, wound infection and hospital stay.

**Conclusion:** Routine use of scrotal drain not advocated in all cases of primary vaginal hydrocele if meticulous hemostasis achieved. Use of electro cautery has significantly decreased bleeding and haematoma chances.

**Keywords:** Prospective, comparing, advantages, putting, hydrocele, repair

### Introduction

Primary vaginal hydrocele is defined as- Abnormal accumulation of serous fluid in tunica vaginalis. It is one of the commonest disease worldwide. Filariasis is a common cause in tropical countries. In India, highest incidence seen along coastal belts. Surgery is the treatment of choice. Lords (plication of tunica), Jabouleys (eversion of sac) are commonest procedures. Both are very easy to perform and simple. However, these operations have certain complications also like- bleeding, infection, injury to cord structures & epididymes, torsion of testes if put in faulty position after surgery.

Bleeding leading to haematoma formation is most common and worrisome complication. Occurs due to oozing from cut edges of sac or small scrotal vessels.

### Aim and objective of study

To assess role of drains after hydrocele surgery in preventing post-operative complications especially haematoma and wound infection.

### Material and Methods

The study was carried out at Department of Surgery Heritage Institute of Medical Sciences Varanasi, UP between January 2020 to September 2021 on 60 patients of small to medium sized hydroceles.

All patients presented with swelling in scrotum. Certain inclusion and exclusion criteria were applied.

Inclusion criteria- solitary swelling in scrotum, swelling positive for transillumination, should be possible to get above the swelling, age >18years.

Exclusion criteria- swellings arising from skin of scrotum, swelling in scrotum separate from testis, negative transillumination, pyocele or filarial scrotum, congenital or secondary hydrocele, swellings with impulse on coughing and reducibility.

Sixty patients with primary vaginal hydrocele mild to moderate size were selected. They were divided into two groups.

In Group A (30 patients) drain to be kept after sac eversion and group B (30 patients) no drain to be kept.

A proforma was filled for each patient from admission till discharge. Along with thorough clinical examination, investigations like cbc, blood sugar, renal function tests, viral markers and ultrasound scrotum were done in all cases. Informed consent was taken in all cases after explaining details.

Patients were operated under LA/SA with all aseptic precautions. Hydrocele fluid was drained & eversion of sac was done in all cases with 2/0 chromic catgut. CRD drain kept in group A and no drain in group B. Skin closed with 2/0 ethilon. Scrotal dressing & support given in all patients. Patients were monitored for immediate and late complications like pain, scrotal haematoma, infection.

Haematoma- any visible/palpable collection of blood.

Soakage assessed in drain group and if soakage present, patients kept for 1-2 days more and then drain was removed. In patients without drain, if there is no pain/scrotal haematoma, patients discharged on next day. Patients reviewed on day 8 for clinical and ultrasound evaluation of wound and if wound healing complete, stitches were removed.

## Results

### 1. Age incidence

Age	No. of patients
<20 years	5
20-40	30
40-60	20
>60	5
Total	60

Youngest patient was 18 years and eldest 80 years.

Maximum no. of cases in age group 20-40 years.

### 1. Duration

Duration in years	No. of patients
0-1 year	8
2-3	13
4-5	25
6-10	8
>10	6
Total	60

### 2. Side of hydrocele

Side	No. of Patients
Right	35
Left	25

Hydrocele was predominant on right side in our study.

### 3. Presentation

All patients presented with scrotal swelling. Some had dragging type of pain, others had mechanical discomfort.

### 4. Anaesthesia

Type of anaesthesia	No. of patients
LA	40
SA	20
Total	60

### 5. Haematoma

Group	No. of patients
A	2
B	3

### 6. Wound Infection

Group	No. of patients
A	3
B	2

### 7. Hospital stay

Group	Average no. of days
A	2-3
B	1-2

In Post operative period, all patients were given scrotal support. Oral antibiotics, anti inflammatory, analgesics were given. Drains kept were removed after 48 hours if no soakage. If soakage present, it was removed after another 2-3 days. Sutures removed on day 8 if wound healing complete.

### Post operative course and complications

Pain- was similar in both groups on day1. But pain & discomfort was more in drain group than non drain group after day1.

Haematoma-was seen in two cases with drain and three cases without drain.

Infection- was seen in three cases with drain & two cases without drain. In such cases, antibiotics were changed to IV and daily dressings with betadine ointment done.

Hospital stay- Most patients had post-operative stay of 24-48 hours. In patients with drain where there was soakage 1-2 days more hospitalization required.

### Summary

This study consisted of operative treatment of primary vaginal hydroceles by eversion of sac method with use of drain vs no drain. Age of patients varied from 18-80 years in our study. Maximum incidence seen in second to fourth decade of life. Scrotal swelling was commonest presentation. Right sided hydrocele more common. Routine use of drains showed no major advantage over non drain group in preventing haematoma and wound infection in our study because these problems occurred with drain use also. Drains have certain disadvantages also like prolonging morbidity, increasing duration of hospitalization & thus cost. Haematoma & wound infection can occur in drain patients too.

### Conclusion

Sac eversion for small to medium idiopathic vaginal hydrocele is a very easy & simple procedure. It can be done through small scrotal incision & as sac is not excised, causes minimal bleeding & post-operative haematoma is quite infrequent. So in small to medium hydrocele, if not much dissection and perfect haemostasis achieved, routine use of drain in all patients not necessary.

If doubt about haemostasis, lot of dissection, adhesions, infection, thickened sac putting of drain is definitely advantageous.

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