



## Study on Comparison of Outcome of Orchiopexy with and without ligation of hernial sac.

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### ABSTRACT

**Aim:** Traditionally, ligation of hernial sac during orchiopexy is considered mandatory to prevent postoperative development of hernia. Our study is to compare the results of orchiopexy, with or without ligation of hernial sac.

**Materials and Methods:** This is a retrospective study on the basis of statistical data available. Duration of the study was 2 years. Data of the patients who already had surgery with and without ligation of hernia were collected. All patients were below 3 years. In all cases testis was palpable in inguinal canal. No patient had evidence of inguinal hernia clinically. Total 66 patients were included in the study. Traditional orchiopexy, with ligation of sac was done in 40 patients, and they were grouped into group A. Rest 26 patients, had orchiopexy without ligation of sac were grouped into group B. In both group, standard orchiopexy was then performed by making subdartos pouch. Incidence of post operative hernia was compared in both groups. Patients were followed up for 3 years.

**Results:** 100% cases of both groups were devoid of the complication of post operative inguinal hernia.

**Discussion:** There is no risk of post operative inguinal hernia, in case of orchiopexy, even if we ligate the hernial sac or not. Provided there is no preoperative inguinal hernia.

**Keywords-** Orchiopexy, Hernial sac, Inguinal hernia, Undescended testis.

### INTRODUCTION

Undescended testis is the most common birth defect of the male genitalia.<sup>[1]</sup> About two third of cases are unilateral; one third involves both testes. In 90% of cases an undescended testis can be felt in the inguinal canal; in a minority the testis or testes

are in the abdomen or nonexistent. Undescended testes can be brought into the scrotum in infancy by a surgical procedure called orchiopexy.<sup>[2]</sup>

The Ligation of the hernial sac is mandatory in conventional and accepted technique of orchiopexy. Some authors mention about the technique of non

ligation of hernia sac during orchiopexy. Some surgeons follow this technique. We planned this study to compare the results of orchiopexy with or without ligation of hernia sac.

## MATERIALS AND METHODS

Aim of our study: Traditionally, ligation of hernial sac during orchiopexy is considered mandatory to prevent postoperative development of hernia. Our study compared the results of orchiopexy, with or without ligation of hernial sac. This is a retrospective study on the basis of statistical data available. Duration of the study was 2 years. Data of the patients who already had surgery with and without ligation of hernia were collected. All patients were below 3 years. Patient with both unilateral and bilateral undescended testis were included in the study. In all the patients' testis was palpable in inguinal canal. No patient had evidence of inguinal hernia clinically. Total 66 patients were included in the study. Traditional orchiopexy, with ligation of sac was done in 40 patients, and they were grouped into group A. In this group after the opening of inguinal canal, hernial sac dissected from the spermatic cord till deep inguinal ring, and sac was ligated with 3-0 vicryl at the highest point. Rest 26 patients had orchiopexy without ligation of sac, were grouped into group B. In this group after the opening of inguinal canal, the hernial sac was first opened up, divided and the proximal end of the divided sac was very gently peeled off with dissecting forceps as high as possible without damaging the cord structures. It was left as such without ligation. In both group, standard orchiopexy was then performed by making subdartos pouch.

Incidence of post operative hernia was compared in both groups. Patients were followed up for 3 years.

## RESULTS

Total 66 patients were included in the study. All the cases were followed up for three years. In both groups no case had the incidence of post operative hernia. Regarding statistics, 100% cases of both groups were devoid of the complication of post operative hernia. So our hypothesis, "There is no risk of post operative inguinal hernia, in the case orchiopexy, even if we ligate the hernial sac or not. Provided there is no preoperative inguinal hernia." is significant.

	Group A Orchiopexy with ligation of hernia sac	Group B Orchiopexy without ligation of hernia sac.
Number of cases	40	26
Incidence of post operative inguinal hernia	0	0

## DISCUSSION

Hernial sac has been routinely dissected and meticulously freed from the cord structures and suture ligated proximally during inguinal orchiopexy. This is done to achieve adequate length of the cord to bring down the testes to the scrotum to its normal position and prevent development hernia postoperatively.<sup>[3]</sup>

In cases of inguinal hernia in children, Mohta *et al.*<sup>[4]</sup> suggested that nonligation of hernia sac during

herniotomy in children has no untoward effect on the early complications and recurrence rate. The study was based on the fact that peritoneal defect closes by metamorphosis of the *insitu* mesodermal cells.

Ligation of hernia sac is not necessary in inguinal orchiopexy. If we don't ligate hernia sac, several minutes of operating time are saved as we can avoid the holding of the proximal cut end of the hernial sac with multiple small haemostatic forceps and suture ligating it, especially when the sac is very thin and tends to tear very easily.<sup>[3]</sup>

It is found that the most important criteria for bringing down the testes in the scrotum is the length of the testicular vessels. If we don't ligate hernia sac, extra length of the testicular vessel can be achieved by peeling off the peritoneum as high as possible. If we don't ligate the sac accidental ligation of the cord structures is avoided.<sup>[3]</sup>

Our study also supports this. According to our study, there is no risk of post operative inguinal hernia, in the case orchiopexy, even if we ligate the hernial sac or not. Provided there is no preoperative inguinal hernia. At the same time, operating time is decreased, extralength of the testicular vessels can be achieved, and more over accidental ligation of cord structures are avoided. So our inference is orchiopexy without ligation of sac can be practiced with good results.

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