

## Non-Ligation of Patent Processus Vaginalis during Orchidopexy

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### Abstract:

**Aims:** A prospective study has been carried out to find out the necessity of ligation of processus vaginalis during orchidopexy in cases of Undescended testis.

**Methods:** 217 cases of palpable undescended testis (UDT), age ranging between six months to twelve years were selected. Orchidopexy was done without ligating the processus vaginalis.

**Results:** A strict follow-up ranging between two to eight years failed to show any postoperative hernia

**Conclusions:** Ligation of patent processus vaginalis is an unnecessary step in the procedure of orchidopexy.

**Keywords:** Processus vaginalis, orchiopexy, non-ligation.

Date of Submission: 18-12-2018

Date of acceptance: 03-01-2019

### I. Introduction

Undescended testis is a common paediatric problem, occurring in 1% Of <1 year population. The testis is usually brought down around six months of age (1). For full mobilization of testis, it is necessary to dissect the processus vaginalis, and to ligate it near the deep inguinal ring. It is done in apprehension of appearance of hernia postoperatively. The concept of ligation of neck of the sac during herniotomy has been challenged recently by several authors (2-5) based on the fact that any peritoneal defect closes within 24 hours by metamorphosis of the in-situ mesodermal cells (6). We report our results of nonligation of patent processus during orchidopexy.

### II. Materials and methods

This prospective study was taken up between April 2011 to March 2017 consisting 217 cases with the age range of 6 months to 12 years. Palpable UDT cases only were included in this study. Patients presenting with clinical hernia and impalpable testis were excluded from this study. Among the total 217 cases, 180 cases were unilateral of which 108 were right sided and 72 cases were left sided. 37 cases were bilateral.

Orchidopexy was performed through groin crease incision. The processus vaginalis (sac) was opened, dissected free meticulously from vas and testicular vessels upto the deep ring, so that the bowstring effect is removed and adequate length of the cord is achieved to bring down the testis in the scrotum. Orchidopexy was performed by subdartos pouch technique.

### III. Results

All cases were followed up between two to eight years. Strict follow-up in the out-patient clinic failed to detect any hernia postoperatively.

### IV. Discussion

Necessity to dissect and divide processus vaginalis lies in eliminating its bowstring effect over the cord and gain maximum length. Ligation of processus vaginalis is done to prevent postoperative hernia. But it has been shown by Mohta et. al (2) that nonligation of sac during herniotomy has no effect on occurrence of hernia. Similarly Shulman et al (3) has shown similar result in their series of adult hernioplasty cases. Study by Schier (4) on laparoscopic groin hernia repair shows that suturing of peritoneum was not related to decreased risk of clinical hernia. Handa et al (5) has also showed that closure of internal inguinal ring is a needless step in orchidopexy.

Any defect in the peritoneum closes within 24 hours by metamorphosis of mesenchymal cells (6). So ligation of patent processus has no influence on occurrence of hernia irrespective of the diameter of processus vaginalis at the deep inguinal ring.

Moreover , this procedure saves operative time and eliminates the risk of damaging the vas and vessels during ligation of sac .

In this study , we have not ligated the patent processus , at the deep ring . We have dissected it meticulously from the cord as high as practicable and divided it . During our follow up period of upto 8 years we have not found any postoperative hernia .

So , we suggest that ligation of patent processus vaginalis is unnecessary and this reduces operative time and possibility of injury to cord structures .

### **V. Conclusion**

Ligation of patent processus vaginalis is an unnecessary step in the procedure of orchidopexy

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IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 18, no. 1, 2018, pp 29-30.