



## A Prospective study showing incidence of Inguinal Hernia with Undescended Testes in KMC, Katihar

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### Introduction

Undescended testes is the failure of descent of the testes even once in the entire life time up to the base of the scrotum. In the 8<sup>th</sup> week of IUL, the testes arise in the abdominal cavity i.e retroperitoneally and descend through the inguinal canal to the scrotum in the last trimester.<sup>1</sup> Testicular descent is a dynamic process, and about 4% of full term infants (and about 25% of premature infants) will not have a descended testis at birth.<sup>2</sup> 1.5% of boys by three months of age will still have undescended testis.<sup>3</sup> Undescended testes and congenital inguinal hernia commonly co-exist, with the principal defect being a patent process vaginalis.

### Aim

In this study, we aim to study the incidence of inguinal hernia / patent process vaginalis with undescended testes.

### Material & Method

We conducted a prospective study, of 30 paediatric patients (less than 14 years old) over a

one year period, who had undergone 1<sup>st</sup> stage orchidopexy or orchitectomy.

**Inclusion Criteria:** Paediatric age group less than 14 years old, Not associated with any other congenital anomaly.

**Exclusion Criteria:** Children below 1 year of age and above 14 years of age.

### Results

During the study of 1 year, 30 paediatric patients underwent orchidopexy procedures for undescended testes. The age range was 2 – 14 years with mean age of 6.98 years. Out of the 30 patients, 20 (66.66%) patients had B/L procedure, 10 (33.33%) patients had unilateral side orchidopexy. The majority of the testes were found in the inguinal canal (63.33% i.e 19), 8 (26.66%) testes were present at the superficial inguinal ring, 9 (30 %) were at the deep inguinal ring, 2 (6.66%) found at mid inguinal region and 8 (26.66%) were found at root of scrotum. Only 1 testes (3.33 %) was retroperitoneal and 2(6.66%) testes were ectopic in the thigh.

Out of the 20 bilateral orchidopexies, 18 (90%) patients had mirror image testes, lying in the same site on the contra lateral side, while 2 (10%) patients had both the testes lying at 2 different levels.

All cases had exploration for the presence of inguinal hernia / patent process vaginalis which was repaired, if found, at the same setting. The overall incidence of inguinal hernia / patent process vaginalis associated with undescended testis was 76.66% (23).

Only 2 of the 10 patients with bilateral undescended testes and inguinal hernia / patent process vaginalis had a unilateral hernia on the right side, the remaining 8 patients had bilateral inguinal hernias / patent processes vaginalis. The surgery and post operative period was uneventful and there was no recurrence on any of the surgery performed.

### Discussion

As per the study conducted there is correlation of undescended testis with inguinal hernia. The testes usually reach their final destination in the scrotum by the third trimester. In approximately 90% of infants, the processus vaginalis seals and becomes a thin band of tissue without a lumen or opening. Hernia sacs do occur in this region if this muscular obliteration is incomplete and allows for herniation as well as abnormal testicular descent and positioning due to defective muscular propulsion.

Patients may come in the OPD at any age with cryptorchidism although most studies advocate an early intervention within the first 1-2 years of life. This is seen as beneficial in preserving the testicle as well as reducing the risk of infertility & malignant transformation seen in later part of life. The incidence of inguinal hernia / patent process vaginalis reported in association with undescended testes varies in the literature. Several studies suggest that undescended testes is almost always associated with an indirect inguinal hernia. In a study by Al-Abbadi and Smadi et.al. conducted on 37 children, the undescended testis

associated with indirect inguinal hernia was reported in 75.68%. On the other hand, some studies suggest that only 20% of patients with undescended testes had inguinal hernia <sup>11</sup>. Tanyel et al. and Davenport, clarified that although the processus vaginalis is patent in boys with undescended testis, clinical inguinal hernia is only encountered in 10-15% <sup>2</sup>.

In our research it was confirmed that inguinal hernias / patent process vaginalis are a common co-occurrence in children who present with undescended testes. And this seems the factor in preventing the normal descend of the testis.

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