

## Late ascended testes: Is ectopic gubernacular insertion a criterion for an embryologic pathogenetic background?

Eur Urol Suppl 2018; 17(2);e1008

Haid B. <sup>1</sup>, Spinoit A-F. <sup>2</sup>, Radford A. <sup>3</sup>, Rein P. <sup>1</sup>, Oswald J. <sup>1</sup>, Silay M.S. <sup>4</sup>

<sup>1</sup>Ordensklinikum Linz, Hospital of the Sisters of Charity, Dept. of Pediatric Urology, Linz, Austria, <sup>2</sup>UZ Gent, Dept. of Urology, Ghent, Belgium,

<sup>3</sup>Leeds Children's Hospital, NHS Trust, Dept. of Pediatric Surgery, Leeds, United Kingdom, <sup>4</sup>Istanbul Medeniyet University, Dept. of Pediatric Urology, Istanbul, Turkey

**Introduction & Objectives:** Approximately 0.8% of 1-year-old boys have an undescended testis and it is the most common genital abnormality identified at birth in males. Ascension of testes from a scrotal position is described with an incidence of up to 45 % in those, who are operated after the age of 4 with a high potential for damage to their germ cells if treatment is deferred. Speculations with regard to etiology of late ascension of testes include the fixation of the testis by a non-occluded processus vaginalis peritonei and growth of the child. We aimed at investigating a pathologic gubernacular insertion in boys with late ascended testis as a possible causative factor.

**Materials & Methods:** A multicenter prospective study was carried out between 05/2016 and 09/2017 in children with true, well-documented ascended testes in 4 different pediatric urology centers. Children who had previous inguinal surgery (hernia repair, hydrocele etc), that may cause iatrogenic ascending testis as well as those with retractile testes were excluded. Previous examination of the testis, the specialty of the examiner and age at surgery were recorded. All patients were evaluated regarding their gubernacular insertion during orchidopexy. The presence of a patent processus vaginalis and dissociation between the epididymis and testis were also documented. All the variables were statistically analyzed.

**Results:** A total of 77 patients were included prospectively. Their mean age at surgery was 73.1 months (median 69 month). The scrotal position of the testis was documented in 49.4% (38 patients) by a pediatric urologist and in 50.4% (39 patients) by a pediatrician. During surgery 81.9% (63 testes) were found to be in the distal groin, 7.7% (10 testes) in the high groin, 2.6% (2 testes) were ectopic and 1.2% (1 testis) not palpable. In 3.9% (3 patients) we found an orthotopic, deep scrotal gubernacular insertion, whereas it was non-orthotopic in 96,1% (76 patients; 26, 34.2% insertion in the groin; 48, 63.2% high scrotal insertion). In 48.1% (37 patients) there was nothing special otherwise, 35.1% had an open processus vaginalis peritonei, 15.6% (12 patients) had a small, dysplastic appearing testis with a testis-epididymis dissociation.

**Conclusions:** Our results point at a causative role of an ectopic gubernacular insertion in patients with well documented, true ascending testes. A patent processus vaginalis was only present in 35.1%.