



## Anatomical correlation of undescended testes

Dr.Manisha Kumari<sup>1</sup>, Dr.Shilpa Gupta<sup>2</sup>

<sup>1,2</sup> MD anatomy

<sup>1</sup> Senior Demonstrator Anatomy

Government Medical College, Bhilwara.

### ABSTRACT:

Background: Undescended testis (UDT) is a common childhood condition in which a boy is born without having one or both testes in their scrotum.

Methods: Total 50 boys above the age 6 month referred from clinical diagnosis of undescended testes. The aim of examination was to locate undescended testis in inguinal region and/or pelvis. The location of testis was noted followed by its size, texture & vascularity. If necessary palpable examination was conducted.

Results: Total 50 patients were studied the age group above 06 months. In 50 patients 41 (82%) patients had unilateral undescended testes and 18% bilateral. In unilateral undescended testes prevalence was observed more on right side i.e. 22 (44%) and 19(38%) on left side. Ultrasound localized the position of testes more in the inguinal canal some in abdomen and few testes were not be localized. Out of 50 undescended testes 42(84%) in the inguinal canal, 06 in abdomen and 2 was not localized.

Conclusion: The undescended testes more prevalent on right side and in inguinal region.

**Keywords:** Testes, Undescended, childhood.

### Introduction

Undescended testis (UDT) is a common childhood condition in which a boy is born without having one or both testes in their scrotum. It is a very frequent clinical finding in boys, with a prevalence of about 2–4%. The medical term for UDT is cryptorchidism. The inguinoscrotal phase of testicular descent normally takes place in the last trimester of pregnancy.<sup>1</sup>

Undescended testes are associated with and psychological problems when the boy is grown. Wooddescribed an undescended testicle will usually descend during the first year of life, but to reduce these risks, undescended testes can be brought into the scrotum by a surgical procedure<sup>1,2</sup>

The descent of the testes consists of the opening of a connection from the testis from abdomen to its final location in scrotum with the development of the gubernaculum, which subsequently pulls and translocates the testis

down into the developing scrotum. Ultimately, the passageway closes behind the testis.

### Material & Method

Total 50 boys above the age 6 month referred from clinical diagnosis of undescended testes. The aim of examination was to locate undescended testis in inguinal region and/or pelvis. The location of testis was noted followed by its size, texture & vascularity. If necessary palpable examination was conducted.

### Results

Total 50 patients were studied the age group above 06 months. In 50 patients 41 (82%) patients had unilateral undescended testes and 18% bilateral. In unilateral undescended testes prevalence was observed more on right side i.e. 22 (44%) and 19(38%) on left side. Ultrasound localized the position of testes more in the inguinal canal some in abdomen and few testes were not be localized. Out of 50 undescended testes 42(84%) in the inguinal canal, 06 in abdomen and 2 was not localized.

**Table 1: Side of undescended testes**

Side	No. of patients	Percentage
Right	22	44
Left	19	38
Bilateral	9	18

### Discussion

The descent of the testis requires two phases trans-abdominal and inguinal phase. During the descent of testes Gubernaculum plays important role. Gubernaculum is a mesenchymal bend attached from lower pole of testes to the scrotum<sup>4</sup>. Gubernaculum starts condenses during 7th week during transabdominal phase between 7th and 12th week the gubernaculum shortens and pulls the testis down to the proximally to deep inguinal ring. Inguino-scrotal phase starts during the 3rd to 7th month and testes remains near the inguinal canal and then enters the inguinal canal. During 9th month of intra uterine life testis have completely entered the scrotal sac . During the growth of the fetus Leydig cells secrete insulin 3 stimulate gubernaculum enlargement augmented by MIS (mullerian inhibiting substance) and T (testosterone) which also causes regression of cranial suspensory ligament (CSL)<sup>5</sup>.

In 2007 according to Sinha et al<sup>6</sup> of the 250 cases under study 202 (80.8%) were unilateral in that cases of right sided undescended testis were 110 (54.5%) and 92 (45.5%) cases of left sided undescended testis and 48 (19.2%) cases of bilateral undescended testis were present.

According to Christofer (2008)<sup>7</sup>, the right testis is affected in 50% of cases, the left testis is affected in 30% of cases, and double arrest occurs in 20% of cases.

Onkar et al (2012)<sup>8</sup> out of 41, 25 had unilateral and 8 had bilateral undescended testis. Incidence was observed more on right side. (60%). Unilateral undescended testis is more likely to occur because androgens act independently on each side via the ipsilateral

genitofemoral nerve and defects in neuronal development of CGRP action could lead to unilateral undescended testis.

### Conclusion

The undescended testes more prevalent on right side and in inguinal region.

### References

1. Güvenç, B. H.; Sözübir, S.; Ekingen, G. & Senel, U. Advantages of video-assisted approach in detecting epididymal anomalies and treatment of non palpable testis. *Urol. Int.*,74(2):127-34,2005.
2. Tomiyama, H.; Sasaki, Y.; Huynh, J.; Yong, E.; Ting, A. & Hutson, J. M. Testicular descent, cryptorchidism and inguinal hernia: the Melbourne perspective. *J. Pediatr. Urol.*,1(1):11-25,2005.
3. Wood, HM, Elder JS (February 2009). "Cryptorchidism and testicular cancer: separating fact from fiction" *The Journal of urology*181(2):452-61.
4. Schoenwolf, G. C.; Bleyl, S. B.; Brauer, P. R. & FrancisWest, P. H. *Larsen's Human Embryology*. 4th ed. New York, Churchill Livingstone, 2009. Pp.26-530.
5. Hutson, J. M. & Hasthorpe, S. Testicular descent and cryptorchidism: the state of the art in 2004. *J. Pediatr. Surg.*,40(2):297-302,2005.
6. C K Sinha, et al, Delayed diagnosis for undescended testis. *Indian Pediatrics* 2008;45.
7. Christopher G Fowler Testis and Scrotum. *Bailey and love's Short Practice of Surgery*. 2008;25(75):1377-1380.
8. Onkar et al, study of undescended testes by high frequency ultrasound *Int. J. Morphol*, 30(3):1085- 1089,2012.