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## A rare case of viable healthy undescended testis in an adult male with WPW syndrome

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### Abstract

Undescended testis is relatively common condition encountered in clinical practice in children but an adult male presenting with undescended testis is not so common. Early intervention usually includes a surgical approach with orchidopexy done in children and orchidectomy in adults. Herewith presenting a case of undescended testis in an adult male, which was found viable and orchidopexy was done as opposed to orchidectomy.

**Keywords:** Cryptorchidism, undescended testis, orchidopexy, orchidectomy, fertility

### Introduction

Undescended testis/Cryptorchidism is a condition in which one or both testis fail to descend into the scrotum. The testis may be present in the internal ring or inguinal canal or the external ring. At birth, approximately 95% of infants have testicle normally placed in the scrotum.

Incidence of undescended testis is approximately 30% in preterm infants and 1-3% at term. Usually the presentation of undescended testis occurs during childhood but an adult presenting with undescended testis is quite unusual.

We hereby report a case of viable and healthy undescended testis in an adult male managed by preserving the testicle and doing orchidopexy.

### Case presentation

A 28 year old adult male presented to the OPD with c/o swelling in the right groin since birth and swelling in the left inguinal region for past 1 year. No association with trauma.

On examination, patient was conscious, oriented and afebrile and presented with a swelling in the right inguinal region 2.5\*2.5 cm, hemispherical in shape, with smooth surface, no warmth, no tenderness, soft in consistency, mobile, could not be pulled back into scrotum, no cough impulse. Right scrotum- empty.

Left inguinal region- A swelling of size 4\*3 cm noted in the left inguinal region, pyriform in shape, cough impulse +, no warmth, non-tender, partially reducible.

Deep ring occlusion test- swelling doesn't increase in size

3 finger test-Impulse noted in index finger

Left scrotum- testis normal, palpable

Penis – normal

Usg taken showed left inguinal hernia with omentum as content, right undescended testis with vascularity intact.



**Fig 1:** Ultrasound image showing right undescended testis with intact vascularity

Routine investigations taken like CBC, RBS, RFT, Electrolytes were normal. ECG taken showed J inversions in V4, V5, V6 suggestive of WPW syndrome. Further evaluation with ECHO - Ejection fraction-60%. No

significant abnormality with normal biventricular function. Asymptomatic WPW syndrome.

Patient was taken up for surgery after cardiology opinion under moderate cardiac risk.



**Fig 2:** Images showing viable right undescended testis



**Fig 3:** Image showing creation of dartos pouch and rt orchidopexy

Under epidural-spinal anaesthesia, under sterile aseptic precautions, right inguinal skin crease incision was made, inguinal canal was opened. Viable right testis with cord structures identified and delineated. Posterior wall strengthening done. Testis and cord brought into scrotum through a separate right scrotal paramedian incision. Dartos pouch created and right orchidopexy done as the testis was healthy and viable.

Left side-left inguinal herniorrhaphy with distal omentectomy done. Post-operative period was uneventful.

### Discussion

Cryptorchidism/undescended testis occurs in approximately 3% of full term infants. Some undescended testis eventually descend by 1 year of age, but they are unlikely to descend after this time.

Cryptorchidism is a condition which results from a complex hereditary series of not fully understood events involving the HPG (Hypothalamo Pituitary Gonadal) axis. The incidence is indirectly related to birth weight of the child and it drastically decreases during the first 3 months after birth. Many non-scrotal testes are retractile and therefore require no therapy whatsoever<sup>[6]</sup>.

The undescended testis is associated with histologic and morphologic changes as early as six months of age, atrophy of leydig cells, decrease in tubular diameter and impaired spermatogenesis can occur by 2 years of age<sup>[1]</sup>.

Seventy percent of undescended testes in adult patients usually had no evidence of spermatogenesis. The testis which is not in the scrotum beyond puberty will not produce sperm<sup>[5]</sup>. This fact, together with the malignancy risk in those testes in which germ cells are present, suggests that

orchidectomy should be performed in unilateral cases of undescended testis<sup>[2]</sup>.

The risk of malignant transformation has been reported to be significantly greater for men with a history of undescended testis. Although doing orchidopexy does not decrease the malignancy risk associated with undescended testis, it allows earlier detection<sup>[1]</sup>. Current indications for orchidopexy are to decrease the risk of infertility and to facilitate testicular self-examination<sup>[3]</sup>.

In a study done with 226 patients with undescended testis, children under 16 months of age, who underwent testicular biopsy during surgery, statistical analysis was done which showed that when comparing undescended to descended testes, fertility of patients under 1 year of age, there was no significant difference, whereas in all other age groups there was significant difference in fertility indices. Fertility indices were significantly reduced from normal values in all age groups with unilateral cryptorchidism<sup>[4]</sup>.

The risk of testicular carcinoma is high in men with a history of cryptorchidism and even includes the other normal descended testes. This risk may be decreased by doing orchidopexy as early as possible. Fertility is impaired in men with cryptorchidism/ undescended testis and is reported to be no better than 75% in men who have undergone unilateral orchidopexy and 50% in men who have undergone successful unilateral bilateral orchidopexy<sup>6</sup>.

Treatment approach for undescended testis in children are usually well-established. Most commonly, orchidopexy is suggested for children with undescended testis, that remains undescended after 6 months of age<sup>[7]</sup>. However, it has been difficult to establish a standard treatment protocol for cryptorchidism in post pubertal age group, given the small number of patients with this condition. Unlike in children with undescended testis, there is increased risk of neoplasms in post pubertal age group with cryptorchidism which has led orchidectomy to be the recommended treatment<sup>[8]</sup>. However, routine orchidectomy should be avoided.

Hence, it is recommended that all children with cryptorchid testes undergo treatment by the age of 1 or 2 years<sup>[6]</sup>.

Majority of the cases with undescended testis in post pubertal age group, were found to have impaired endocrine function, decreased fertility and high risk of testicular carcinoma. In patients less than 50 years of age with a unilateral palpable testis and a normal contralateral testis, orchidectomy is the preferable treatment. In patients with only a single testis or with bilateral post pubertal

cryptorchid testis, preservative treatment might be considered, though careful follow up might be required. In cryptorchidism in post pubertal age group with non-palpable testes, the laparoscopic approach is recommended. In patients over 50 years of age with palpable cryptorchidism, orchidectomy or careful observation may be considered. After orchidopexy, patients should be taught to regular perform self-examinations over the entire course of their lives to look for carcinoma testis<sup>[9]</sup>.

### Conclusion

A rare case of viable testis in an adult male with unilateral undescended testis. Normally the testis would have atrophied but here testis was viable and as opposed to orchidectomy usually done, orchidopexy was done. Post-surgery also testis showed viability radiographically. Routine follow up advised to check for carcinoma at regular intervals.

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