

## Positive TESE after Orchidopexy of Bilateral Abdominal Cryptorchidism in an Adult: A

### Case Report

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### 1. Abstract

**Background:** Undescended testis is a congenital anomaly that is usually discovered in childhood and undergoes orchidopexy. Undiscovered adult patient with this condition usually undergoes orchiectomy due to atrophy of the testis and a high risk of malignancy. Retrieving vital germ cells from adult bilateral non-intra-abdominal cryptorchidism is a very rare finding and the incidence for intra-abdominal is even rarer. We are reporting the case of bilateral intra-abdominal cryptorchidism with positive TEAE during orchidopexy. We consider this as a first case was reported in English literature review.

**Case Presentation:** a 37-year male came to our clinic complaining of infertility after eight years of marriage. Examination showed absent of bilateral testis, and the ultrasound showed intra-abdominal testis. His wife underwent an assessment that was normal for contributing female factors. A laparoscopic orchidopexy was done; one testis was fixed to the scrotum, and the second was fixed to the inguinal. A TESE was obtained during the operation and showed viable sperm.

**Conclusion:** Our Aim is to report successful sperm extraction using TESE from intra-abdominal post-pubertal undescended testis

### 2. Introduction

Cryptorchidism complicates about 1% of full-term pregnancies, but the risk increases to 3-30% in preterm deliveries. The con-

dition increases the risk of infertility and testicular cancer if left untreated. Most cases are discovered early, and the treatment of choice is orchidopexy at the age of 1-2 years. Most experts recommend orchiectomy in adults. However, sometimes orchidopexy and TESE is an option that can be considered in an adult patient to retrieve viable spermatozoa and preserve fertility [1].

### 3. Case Presentation

A 37-year-old male, presented to our clinic with bilateral cryptorchidism seeking fertility, he had been married for 8 years, they have been trying to conceive since then, he has normal sexual desire, and he can maintain satisfactory erection and normal ejaculation. His wife had undergone a complete gynaecological assessment and she was found normal. On examination there were no palpable testicles in the scrotum or inguinal region and his semen analysis results showed Azoospermia, normal tumor marker and hormonal analysis, ultrasound scans showed that both testicles in the pelvic region just anterior to the iliac vessels with volume 4.6cc, 4.5cc for the left and right testicle respectively; therefore, he was offered a laparoscopic search.

A laparoscopic search was performed, both testicles were found in the level of bifurcation of common iliac artery (Figure 1), orchidopexy and TESE was done, the left testis was fixed into the external inguinal canal and (Figure 2) found it was containing immotile spermatozoa (Figure 3), while the right one was fixed into scrotum, the retrieved specimen was found to contain spermatozoa.



**Figure1:**the location of the intra-abdominal testicles



**Figure2:**The orchidopexy



**Figure3:**Immotile spermatozoa

## 4. Discussion

The father of cancer immunotherapy Dr. William Coley in 1911 describe a patient with bilateral UDT became a father after orchidopexy. Dr. Coley reported this was the second described case, a century later another three cases had been reported the literature been fathers [2]. In 2020 A systematic literature review and analysis of case reports was conducted on fertility potential in adult men who were treated for bilateral cryptorchidism resulted that abdominal testes were more likely to be deficient in germ cells in the histological specimen with 90 % rate [3]. The incidence of cryptorchidism in full-term new-born is 2 % to 5%, therefore it considered as the most common male congenital anomalies. 5% of all cryptorchidism is found intra-abdominally, anywhere along the line between the lower pole of the kidney and the internal inguinal ring [4]. The testicular descent from the abdomen to the scrotum happens during intrauterine life, the mechanism of this descent is poorly understood and so the exact aetiology causing undescended testis is not known. The testis can be located anywhere along the path of descent [5]. Most of the bilateral undescended testis develops azoospermia and most experts advocate repositioning the testis early in life to prevent future infertility as cryptorchidism for longer periods of time has profound damage to the spermatogenesis. Bilateral undescended testis carries the highest rate of infertility [3]. The location of the undescended testis and the age at which it was discovered is the most important prognostic factors that determine future fertility. The intra-abdominal location has the lowest rate of spermatogenesis or retrieving viable sperms from the testis [4]. Biopsies taken from intra-abdominal testis showed a decreased count of germ cells and the rate at which these germ cells decrease increases as the patients get older. It is thought it is one of the most significant risk factors that affect future fertility. Other histological features that were found include decreased microtubule diameter and depletion of germinal cells and microliths [5]. Many Authors have studied the chance of retrieving viable sperms from the post-pubertal undescended testis and most of them came to the conclusion it is very low by the current methods [1, 4].

## 5. Conclusion

Although it is extremely rare successful sperm extraction can be still achieved from bilateral intra-abdominal post-pubertal undescended testis using intra-operative TESE.

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