

A Rare Case of Obstructed Inguinal Hernia Due To an Undescended Testis

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I. Introduction

Although inguinal hernia is frequent, the cryptorchid testis at the age of 32 years is an uncommon entity. The cryptorchid testis is characterized by the extra-scrotal position of the testis. This case demonstrates the utility to understand the surgical anatomy of inguinal hernias. We wish to present this extremely rare case of inguinal hernia, which is the first one that we have encountered in our practice, along with the accompanying prognosis and therapeutic issues and a review of the literature.

II. Case report

A 32 year adult male admitted with chief complaints of inability to pass stool for five days and vomiting for three days. On clinical examination patient had bilateral inguinal hernia including irreducible hernia on left side with empty scrotum. X-ray abdomen showed 3-4 air-fluid levels. Ultrasonography of abdomen suggested herniation of bowel loops and mesentery in left inguinal region with dilated bowel loops (3.5 mm) with to and fro peristalsis. Ultrasonography of scrotum suggested non visualised right testis and ectopic left testis in left inguinal region with left testis smaller in size and with preserved vascularity. Patient was taken for emergency surgery in which left ectopic testis was found to be herniating along with bowel loops (figure-1) due to which bowel loops got obstructed at the neck of hernial sac. Obstruction relieved by opening the sac at the neck. Left ectopic testis was found ischemic and atrophic and so orchidectomy was performed after taking consent. Hernial sac was closed with purse string sutures and sheath closed in double breasting manner. Patient recovered well post-operatively. Histopathology report confirmed a atrophic testis and the presence of leydig cells, seminiferous tubule without testicular germ cell tumor (TGCT).



Figure-1: An undescended testis in inguinal region herniating along with bowel loops and causing obstruction of bowel loops at the neck of hernial sac

III. Discussion

An undescended testicle, sometimes called a cryptorchid testicle, can be found in 3% of the term newborns and 0.5–1.0% of adults.¹ Cryptorchidism is more commonly seen in premature males and associated to genetic disorders in 10% of the cases. The causes of cryptorchidism are: prematurity, spina bifida, hormonal disorders, testicular absence or retractile testes. Jensen et al. concluded that smoking more than 10 cigarettes a day during pregnancy increased the risk of cryptorchidism.² Kaftanovskaya et al. concluded that the second inguinoscrotal stage of testicular descent is clearly androgen-dependent.³ The diagnosis of cryptorchidism is made by physical examination. The diagnosis of cryptorchidism should be considered when non palpable testis and inguinal hernia are present. However, each patient may experience symptoms differently. Nonetheless, for inguinal hernia, the clinical presentation varies, depending on the contents of the hernial sac and the degree of herniation. Because of its varied presentation, clinical examination is often inconclusive.⁴ The correct diagnosis of inguinal hernia is usually made during an inguinal hernia repair, although ultrasonography and computerized tomography have been used to identify an inguinal hernia.⁵ Laparoscopy is useful for both diagnosis and treatment of atypical inguinal hernia.^{6,7}

The complications of unrepaired cryptorchidism are mainly: testicular cancer, inguinal hernia, testicular torsion and infertility. The testicles begin to lose the process of spermatogenesis if they are not in the scrotum because the scrotum is a 'cooler location'. This process explains the link between cryptorchidism and infertility. Very little is known about link between cryptorchidism and germ cell tumorigenesis. In our case, despite its age, histopathology report confirmed the absence of tumor. Because the incidence of testicular cancer generally increases in cryptorchid testes, careful follow-ups are essential.

Usually, cryptorchidism resolves without any intervention before the age of 6 months. Surgical repair for cryptorchidism will be carried if the testicles have not descended. The prognosis of cryptorchid testes is related to the precocity of the management. Most studies have concluded that there is a direct correlation between how long the testis was subjected to a cryptorchid position and germ cell tumor incidence. Pettersson et al. demonstrated that Individuals who had corrective surgery after the age of 13 had an incidence rate of 5.4%, where as those who were treated before 13 had an incidence rate of 2.23%.⁸ In our case, we did not find correlation between the time of surgery and risk of germ cell tumor. Histopathology report confirmed the presence of Leydig cells, seminiferous tubule and Sertoli cells without germ cell tumor. The treatment of cryptorchidism improves the risks of infertility and gonadal neoplasia. Surgical repair for cryptorchidism will result in earlier detection of an eventual tumor.

It is difficult to understand the surgical anatomy of inguinal hernias, but once the surgical exploration is performed, surgical repair is simple. It is controversial whether a contralateral orchidopexy is needed as. Furthermore, the incidence of testicular cancer generally increases in fixed testes.⁹ In our case, the contralateral testis was absent and patient's family was complete with patient having two children. An alternative is hormonal treatment with a series of injections HCG (human chorionic gonadotropin) which stimulate the testis. Kjaer et al. concluded that no age dependency of HCG effects was found, but the position of the testis before treatment influenced the success rate.¹⁰ This treatment is recommended if the testis is very close to the scrotum. Our case is particularly notable because of the unusual presentation of cryptorchid testis as an incarcerated inguinal hernia at the age of 32 years. The patient remained asymptomatic for 32 years.

IV. Conclusion

The surgeon must always be alert to the possibility of cryptorchid testis during a surgical exploration of an inguinal hernia. This is an extremely rare case of cryptorchidism as the patient remained asymptomatic for 32 years. Most studies have concluded direct correlation between how long the testis was subjected to a cryptorchid position and the germ cell tumour incidence. The recommended age of surgical correction is before the age of 2 years. In our case, we did not find correlation between the time of surgery and risk of TGCT. Histopathology report confirmed the presence of Leydig cells, seminiferous tubule and Sertoli cells without germ cell tumor.

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