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Undescended Testis and Right Inguinal Hernia in Adult: A Case Report

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ABSTRACT

Cryptorchidism also known as undescended testis of at least one side is one of the causes of an inguinal hernia. This case report discusses an adult patient presented with a swelling in the right groin. On examination, the patient was found to have a right inguinal hernia and right undescended testis. Testis was intraabdominal lying near deep ring. Testicular tumor markers were normal. Right orchidectomy and right inguinal hernia repair with polypropylene mesh was done. Following surgery, postoperative course was uneventful. Histopathological examination revealed marked hypo spermatogenesis with no signs of testicular malignancy (No granuloma/parasite/intratubular germ cell neoplasia/malignancy).

Keywords: undescended testis, cryptorchidism, inguinal hernia, testicular malignancy.

INTRODUCTION

Undescended testis or cryptorchidism is usually diagnosed in infancy, but it can occasionally present in adulthood. This is most common congenital abnormality diagnosed in early childhood. This condition is often asymptomatic; however, it is risk for testicular malignancy, testicular torsion, infertility, inguinal hernia [1]. This case report details a case of adult presented with right inguinal hernia and right undescended intraabdominal testis. Treatment of undescended testis and inguinal hernia in adult is orchidectomy and repair of inguinal hernia. Procedure done with open technique. Laparoscopic repair also can be done [2].

CASE REPORT

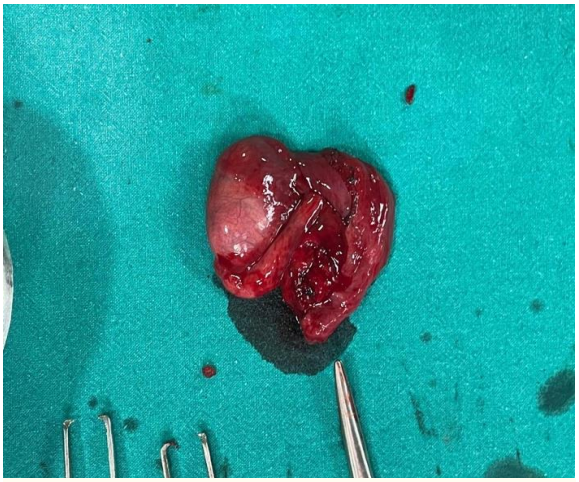
A 41year old male patient presented with right groin swelling for the past six months. The swelling increased in size when standing, coughing, or lifting heavy objects and reduces on lying down. There were no any associated pain, fever, urinary symptoms, constipation, or chronic cough. On examination of the bilateral inguinoscrotal region, the left side appeared normal. On the right side, there was an empty scrotum with a reducible swelling and a positive cough impulse in the right inguinal region. The reducible swelling was palpable near the deep inguinal ring. An ultrasound examination defect of size 12 mm noted in the right inguinal region with herniation of omental fat extending up to the proximal half of the inguinal canal, but not reaching the scrotal sac. The right testicle

was found intra-abdominally near the deep inguinal ring, measuring 33 x 18 mm. Considering the risk for testicular malignancy serum levels of tumour markers as beta HCG, LDH, AFP checked which were within normal limits. The patient underwent surgery for the right inguinal hernia. Right inguinal hernia with omentum as content. Incomplete cord structures were observed. The right testicle was located at the deep inguinal ring, with the vas deferens and testicular vessels positioned nearby. The right testicle was atrophic. After informed consent, right orchidectomy and right inguinal hernia repair using the Lichtenstein technique with polypropylene mesh was done. Histopathology report as benign testis with marked hypo spermatogenesis (Sertoli cell only) with no evidence of granuloma/ parasite/ intratubular germ cell neoplasia/ malignancy. The patient granted their informed consent for this case report and its associated photos to be published.

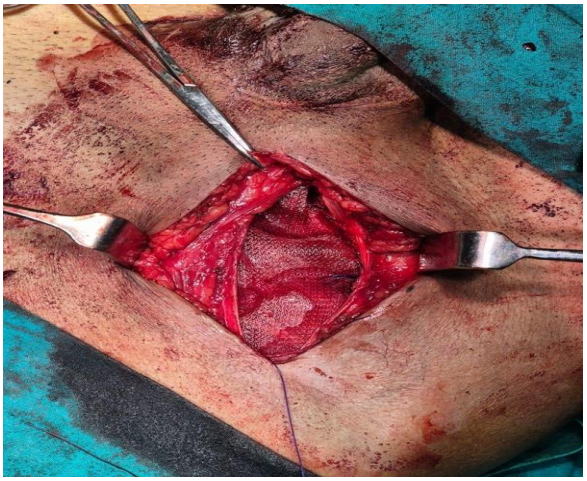
DISCUSSION

The most prevalent congenital abnormality affecting men is cryptorchidism, which is failure of descend at least one testicle in the scrotum. The right testicle is more commonly affected by this medical condition, cryptorchidism can occur unilaterally or bilaterally. Undescended testicles are present in about 23% of full-term male neonates and 30% of preterm male infants at birth. Complications as testicular cancer, testicular torsion, inguinal hernia are known. [1]. The most common imaging technique for assessing undescended testes is ultrasound scan. Computed tomography (CT) is far more reliable than ultrasound at detecting an abdominal testis and nearly as accurate at detecting an undescended testis in the inguinal region. MRIs are more sensitive and specific than ultrasounds. After six months, if the testis has not descended, surgical correction through orchiopexy is recommended to minimize risks and potential complications. In treating cryptorchidism, the two viewpoints of spermatogenesis and malignant transformation must be considered. A decrease in spermatogonia cells, hyperplasia of the interstitium, and atrophy of the seminiferous tubules are reported to be the causes of cryptorchidism's progression at the age of 1.5 years. Furthermore, untreated cryptorchidism is known to have a higher risk of testicular malignancies after the age of ten, and it is uncertain whether orchidopexy can help restore fertility after adulthood [2]. Hernias are however invariably related to undescended testicles. The testis follows a path formed by a hernia. An opening in the oblique and transversalis muscles myofascial plain which can allow the herniation of intra-abdominal or extraperitoneal organs is known as an inguinal hernia. Based upon where they occur, these hernias of the groin can be classified as femoral, direct, or indirect [3,4].

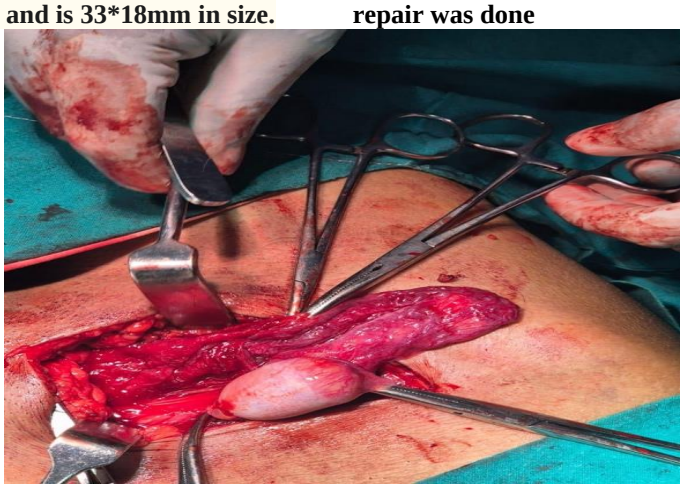
Ultrasonography report: Patient was screened in supine position with cough and Valsalva manoeuvre, defect 12mm noted in right inguinal region with herniation of omental fat in to proximal half of inguinal canal, not reaching in to scrotal sac, seen prominent on Valsalva and cough reflex, suggest inguinal hernia. No bowel loops/collection within. Right testicle is seen intraabdominal at level of deep inguinal ring.



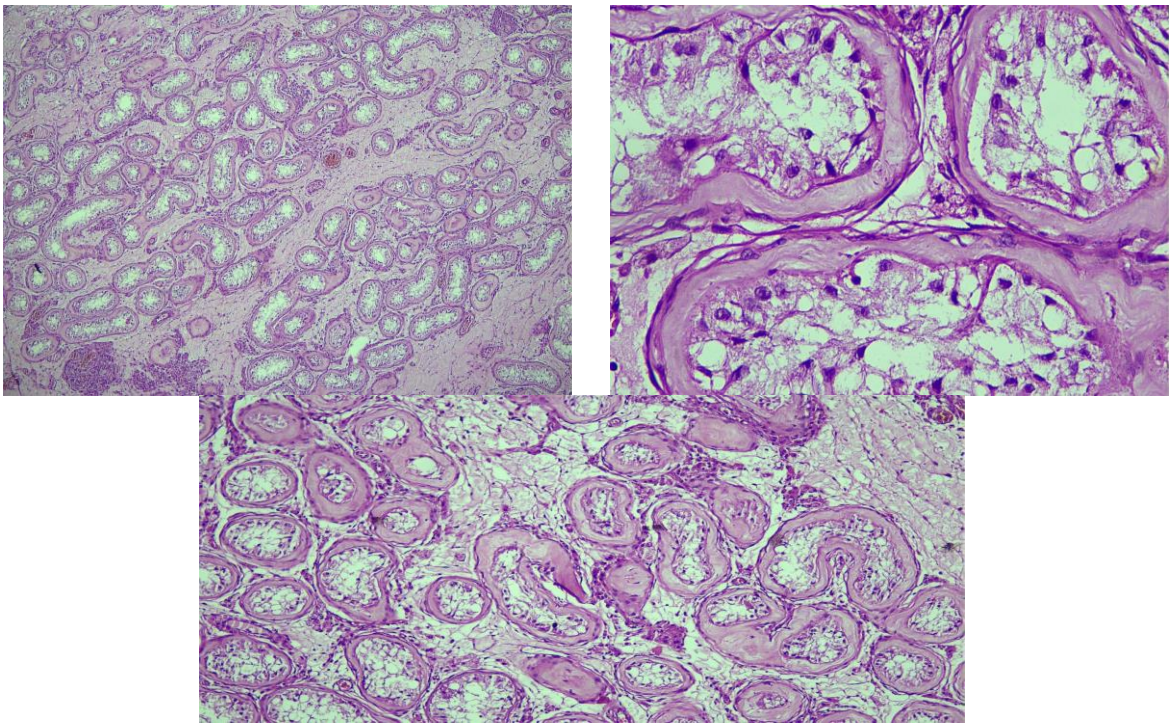
PICTURE 1: The resected right testis was atrophic testis grossly and is 33*18mm in size.



PICTURE 2: Lichtenstein polypropylene mesh repair was done



PICTURE 3: Intraoperative picture of testis and spermatic cord



PICTURE 4: Histopathology of the undescended testis in an adult patient: Benign testis with marked hypospermatogenesis (Sertoli cells only)

CONCLUSION

Adult inguinal hernia is sometimes associated with cryptorchidism i.e. undescended testis condition. Inguinal canal deficit and weak deep ring predispose to this condition. Treatment in adult is inguinal hernia repair and orchidectomy considering risk for the testicular malignancy. Ultrasonography initial investigation. Cross sectional imagining as CT scan or MRI provides additional information and help to plan the surgery. Testis is usually atrophic and hypofunctional in this case.

Declaration by Authors:

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Conflict of Interest: The authors declare no conflict of interest.

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