

LAPAROSCOPY-ASSISTED RESECTION OF A GIANT INTRA-ABDOMINAL SEMINOMA IN AN ADULT UNDESCENDED TESTIS

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ABSTRACT

The incidence of cryptorchidism in infants is 3.3-5.8%, incidence in adults is not known. Cryptorchidism in adults is not uncommon in India for various reasons. Orchiectomy is the best option as malignant transformation of the undescended testis is a very real risk. Our patient was 52 years old with an empty left hemiscrotum and a large lower abdominal swelling. Laparoscopy-assisted resection was performed successfully. Pathology and PLAP studies confirmed seminoma. Chemotherapy is being planned. Laparoscopy has a definite role in the diagnosis (determines exact location) and treatment of cryptorchidism. Both laparoscopic orchiopexy and orchiectomy have been described in the literature.

KEY WORDS: Diagnostic laparoscopy, Cryptorchidism, Large seminoma.

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INTRODUCTION

Cryptorchidism is defined as failure of the testis to descend from its intra-abdominal location into the scrotum. The exact etiology of cryptorchidism is not known. A normal testis develops in the celomic cavity and

begins to descend into the scrotum at 36 weeks, guided by the contractile cord-like structure termed the gubernaculum testis. After complete descent into the scrotum, the gubernaculum testis atrophies; however, it persists if the descent is not complete. In one third of patients, the condition is bilateral. Ultrasound (US), CT, MRI, arteriography, and laparoscopy are used for diagnosis. Cryptorchid testis is 20-48 times more likely to undergo malignant degeneration than normal testis.¹ Seminoma is the most commonly reported malignancy. Orchiopexy is the treatment of choice and usually is performed in patients aged 2-10 years. Orchiopexy does not alter the risk of malignant transformation. The incidence of malignant transformation also is increased in the unaffected testis. Efficacy of hormone treatment for palpable high-scrotal position of the testis is less than 20%.²

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CASE PRESENTATION AND MANAGEMENT

The patient was a 52-year old male presenting with absence of left testis (Figure-1) since childhood and a slow-growing swelling in the lower abdomen for six months. His parents did



Figure 1: Empty left hemiscrotum

not consult a pediatrician when they noticed the absence of testis. There was no pain, weight loss or urinary symptoms. On physical examination of the abdomen, there was a mass occupying the hypogastrium and left iliac fossa; size was 10x7cm, non-tender, and with limited mobility. Laboratory and biochemical investigations were normal. Ultrasonogram and CT scan could not rule out the possibility of a retroperitoneal mass. Diagnostic laparoscopy showed a large tumor in the retroperitoneum posterior to the sigmoid mesocolon (Figure-2), which was freely mobile. Additional 5mm ports were placed in the left lumbar area (left hand working) and in the right iliac fossa (right hand working). A 5mm port in the left hypochondrium was used to

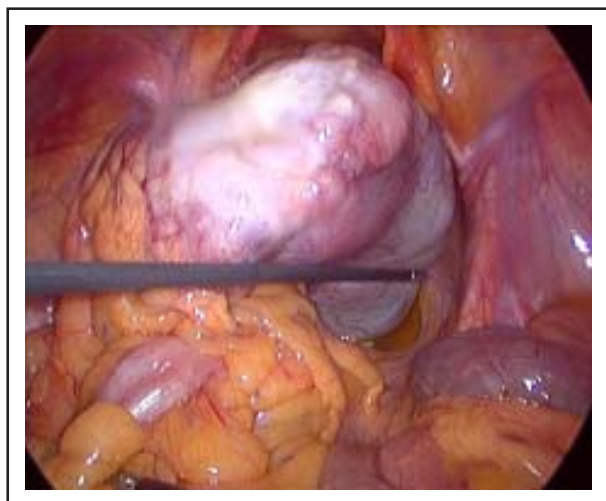


Figure 2: Tumor adjacent to sigmoid colon

retract the bowels. The monitor was placed at the foot end of the patient. Harmonic scalpel (Ethicon, USA) was used to mobilize the retroperitoneum and isolate the tumor. Care was taken to preserve the blood supply to the sigmoid without compromising tumor clearance. A lower midline 'minilaparotomy' incision was made and the resected tumor was delivered out. The postoperative period was uneventful. Patient was discharged on the 4th Post operative day.

Histopathology – tumor composed of polygonal cells intersected by fibrous septae containing blood vessels and vesicular nuclei (Figure-3). Differential diagnosis was lymphoma and seminoma. Placental Alkaline Phosphatase (PLAP) study confirmed seminoma. Chemotherapy is being planned.

DISCUSSION

In infants, the incidence of cryptorchidism is 3.3-5.8%.³ The lifetime risk of death from testicular malignancy in men of any age with undescended testis is approximately 9.7 times the risk in men with normally descended testis. Infertility is observed in 40% of patients with unilateral and 70% of patients with bilateral cryptorchidism. Malignant degeneration occurs in 10% of men with cryptorchid testis. Torsion, if present, usually is secondary to the presence of a mass. Of cryptorchid testes, 72%

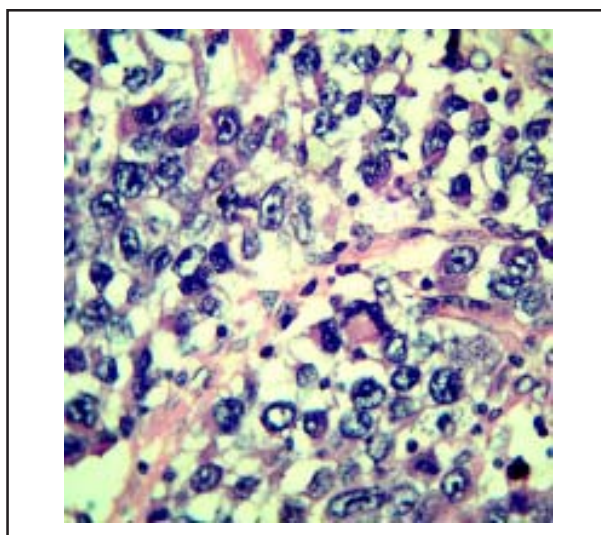


Figure 3: Histopathology

are in the inguinal canal; therefore, they are easily accessible to ultrasonic (US) examination. The most common location of the cryptorchid testis is in the inguinal canal (72%), prescrotal (20%) and abdominal (8%) locations. If US cannot identify the testis, MRI and CT are the subsequent modalities of choice. Laparoscopy is performed if MRI and CT cannot localize the testis. Even though laparoscopy is invasive and expensive, diagnostic accuracy is almost 100%.³ There are some reports of successful removal of large intra-abdominal seminomas.⁴ Laparoscopy for non-palpable, undescended testes was first described by Cortesi et al and improved by Jordan et al, and is now gaining popularity.² This technique not only reveals the presence or absence, but also confirms the anatomical position, of a cryptorchid testicle. Literature has accumulated rapidly in the last few years showing a variable success rate for laparoscopy. Nowadays, most cases of undescended testes are diagnosed and managed in infancy. Patients from developed countries with cryptorchidism presenting in adolescence or early adulthood are exceptionally rare. In India, it is not uncommon to see young adults with undescended testis. Our patient was 52 years old! In a study, Raghavendran et al analyzed the late presentation of patients with

undescended testis. They found that ignorance was the cause in 9% of the patients; 42% due to shyness and 40% were improperly guided by doctors or health workers.⁵ In instances of a non-palpable testis, it is imperative to determine whether a testis actually exists. If an intra-abdominal testis exists, laparoscopic orchiectomy can be performed for the damaged or atrophied testis. Some surgeons prefer pre-operative chemotherapy (cisplatin and etoposide), followed by resection of the residual tumor. Laparoscopy seems to be applicable with great efficacy in cases of adolescent or early-adult intra-abdominal testis, especially in diagnosis. In our case, we could also assess the respectability/fixity of the tumor.

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