RIGHT TESTICULAR SEMINOMA IN AN ADULT WITH BILATERAL CRYPTORCHIDISM PRESENTING AS AN ABDOMINAL MASS: A CASE REPORT AND REVIEW OF LITERATURE

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ABSTRACT

Introduction: *Testicular seminomas are relatively rare malignancies that typically present in younger males with normal testicular descent. However, in the context of bilateral cryptorchidism, the presentation and diagnostic challenges are more complex.* ***Objective:*** *This study aims to report a case of a patient with bilateral cryptorchidism with a seminoma originating from the undescended right testis presenting as a rapidly growing abdominal mass.* ***Case(s) Presentation:*** *We reported a 29-year-old man complaining of a mass in the right lower abdomen for the past four months and no palpable testicles. A whole-abdomen computed tomography image revealed an intra-abdominal mass measuring 11 x 10 x 7 cm and suspected malignancy originating from the undescended testicles.* ***Discussion:****The patient underwent a right orchidectomy and a left orchidopexy. Histopathology confirmed seminoma of the specimen with pT1N0M0 staging. The patient was discharged and later referred to the oncology department.* ***Conclusion:*** *This case emphasizes the importance of promptly genitourinary evaluation during a regular physical examination and closely monitoring individuals with undescended testis due to the potential for it to be a malignancy, especially in patients presenting with an abdominal mass.*

Keywords:*Testicular seminoma, cryptorchidism, case report.*

ABSTRAK

Pendahuluan: *Seminoma testis merupakan keganasan yang relatif jarang terjadi, biasanya muncul pada laki - laki yang lebih muda. Namun, dalam konteks kriptorkismus bilateral, presentasi dan tantangan diagnostiknya lebih kompleks.* ***Tujuan:*** *Studi ini bertujuan untuk melaporkan kasus seorang pasien dengan kriptorkismus bilateral dengan seminoma yang berasal dari testis kanan yang tidak turun, yang bermanifestasi sebagai massa perut yang tumbuh dengan cepat.* ***Presentasi Kasus:*** *Kami melaporkan seorang laki-laki dewasa berusia 29 tahun yang mengeluhkan massa di perut bagian kanan bawah selama empat bulan terakhir disertai tidak adanya testis yang teraba. Gambar tomografi terkomputerisasi seluruh perut menunjukkan massa intra-abdomen berukuran 11 x 10 x 7 cm dengan dugaan keganasan yang berasaldari testis yang tidak turun.* ***Diskusi:*** *Pasien menjalani orkidektomi kanan dan orkidopeksi kiri. Histopatologi mengonfirmasi seminoma pada spesimen dengan stadium pT1N0M0. Pasien dipulangkan dan kemudian dirujuk ke departemen onkologi.* ***Simpulan:*** *Kasus ini menekankan pentingnya evaluasi genitourinari dengan segera selama pemeriksaan fisik rutin dan memantau secara ketat individu dengan testis yang tidak turun karena berpotensi menjadi keganasan, terutama pada pasien yang datang dengan massa perut.*

Kata kunci: *Seminoma testis, kriptorkismus, laporankasus.*

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INTRODUCTION

Testicular neoplasms are the most common cause of testicular masses, contributing to around 5 out of every 100.000 males. It stands as one of the most treatable and curable cancers, with a survival rate of over 95% if detected early.[1] Undescended testicles have a greater likelihood of developing into cancerous tumors, especially intra-abdominal testis. While most cases of cryptorchidism are unilateral, there have been very few reports of bilateral cases.[2] Cryptorchidism is prone to malignant changes, and seminoma is the most common testicular malignant tumor.[3] We report a case of a patient with bilateral

cryptorchidism with a seminoma originating from the undescended right testis presenting as a rapidly growing abdominal mass.

CASE(S) PRESENTATION

We implemented this case section in accordance with the recommendations provided in the CARE Checklist for reporting. A 29-year-old Asian male presented to our urology outpatient clinic with a chief complaint of a mass in the right lower abdomen that had been present for four months prior to admission. There was no evidence of any significant medical conditions, tumors, or surgeries in his past medical history, and there was no familial predisposition to cancer. The patient was also aware of the absence of his testicles four months before admission. However, he lacked awareness of the necessity for medical intervention, which the patient did not seek any medical assistance. A physical examination of the abdomen revealed the presence of a detectable mass with solid consistency, mobile and tenderness.The scrotal examinations revealed that the testicles were not evident in either the scrotum or the inguinal region. The patient's vital signs were within the normal range.

Abdominal tomography scans without contrast revealed an isodense lesion mass intra-abdominal with a size of 11 x 10 x 7 cm. It appears to originate from the right undescended testis, located in the posterior bladder, which presses the bladder to the inferior (Figure 1). The results of the routine blood tests and tumor biomarkers were within the normal range. A laparotomy surgery was performed, which involved making an incision in the lower midline of the abdomen and revealed the presence of a testicular mass located within the abdomen on the right side (Figure 2). No evidence of enlargement was observed in the para-aortic, paracaval, and interaortocaval lymph nodes. A surgical procedure was carried out to remove the right testicle from the abdominal cavity, measuring 11 x 10 x 7 cm and exhibiting a gray color, followed by orchidopexy to fix the left testicle in its proper position (Figure 3). The presence of a seminoma in the testicle was detected through histological analysis of the tumor. There was no evidence of capsular invasion or vascularization (Figure 4). No evidence of lymph nodes or distant metastases was seen in the computed tomography and surgery reports. The patient's pathological staging was determined to be stage IA, defined as pT1N0M0 according to the TNM classification.

On the fifth day after surgery, the patient was discharged and the oncology department provided a prescription for chemotherapy as part of continued treatment. Further evaluation of blood tumor markers and imaging was conducted four months later, which showed no signs of recurrence.The patient was satisfied and patient complaints have improved after the surgery.The patient gave consent for her clinical data to be published, and the data presented have been anonymized to minimize the risk of identification.

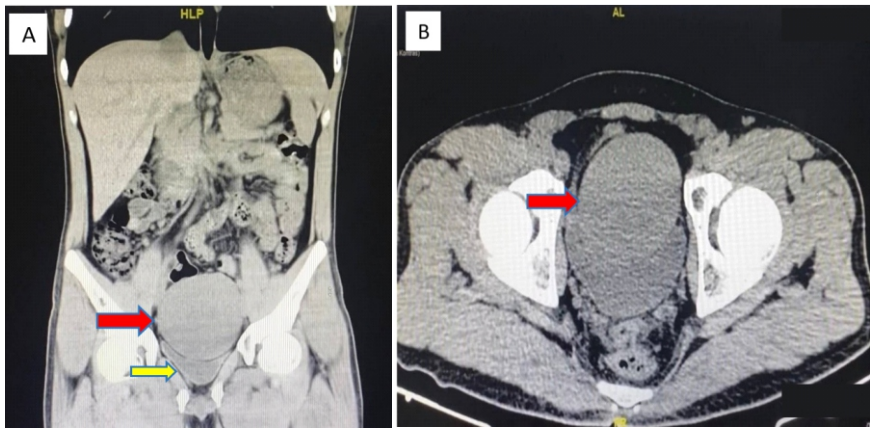

Figure 1. Abdomen computed tomography scan examination without contrast showed an intra-abdominal mass lesion (red arrow which presses the bladder to the inferior (yellow arrow) sized 11 x 7 cm; A) axial view; B) coronal view.

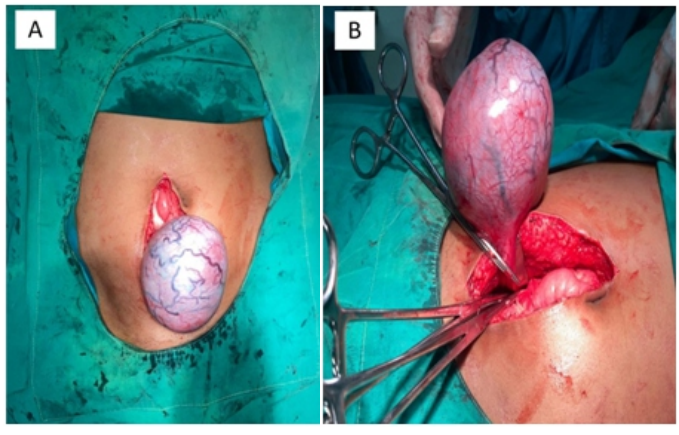

Figure 2. Laparotomy with a lower midline incision revealing a right intra-abdominal testicular mass.

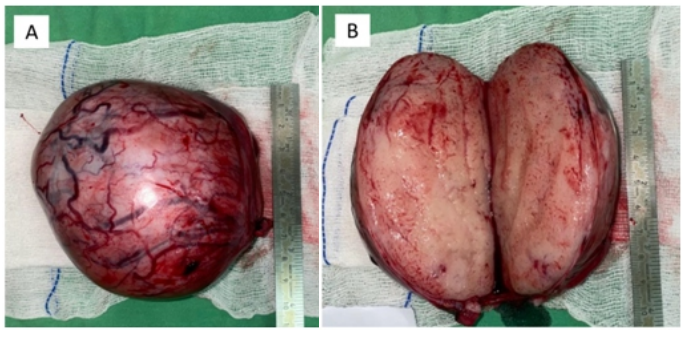

Figure 3. Macroscopic specimen; A) a testicular mass with a size of 11 x 10 x 7 cm; B) a testicular mass cut surface.

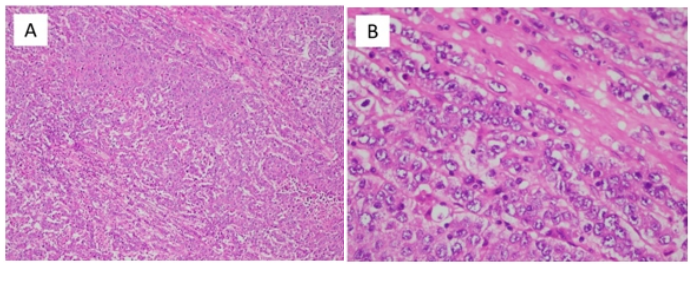

Figure 4. Histological examination revealing seminoma of the right testis with A) a sheet-like pattern of clear cells with inflammatory cells and fibrous septae (H&E staining with 10x magnification) and; B) malignant tumor tissue consists of cells with oval, polygonal, atypical, pleomorphic, prominent nucleoli, and vascular nuclei with a visible connective tissue septa and lymphocyte inflammatory cells and there is found mitotic activity. (H&E staining with 40x magnification).

DISCUSSION

Testicular neoplasms are the most frequent type of solid organ cancer observed in boys between the ages of 15 and 35. Testicular neoplasms are linked to specific risk factors, such as cryptorchidism, hypospadias, a familial history of testicular tumors (particularly in first-degree relatives), infertility, Klinefelter's syndrome, a previous history of contralateral testicular malignancy, and even trauma.[4] Undescended testicles have a much greater risk of developing cancer compared to testicles that have descended correctly. This increased risk ranges from 20 to 48 times higher. Testicular tumors are found in approximately 7-10% of individuals who have a history of cryptorchidism. Among these individuals, seminoma is the most common type of tumor.[5]

Testicular ectopia is a rare condition where the testis is located in an abnormal position. The most common ectopic site for the testis is in the superficial inguinal pouch. In extremely rare cases, the testis can be found in the abdomen.[6] The position of the undescended testis is linked to the likelihood of developing cancer, with the intra-abdominal testis position carrying the highest risk for malignancy. Most undescended testes are found below the external inguinal ring and can be palpable.[7] A reported case by Faruk et al. reported a 24year-old man with no palpable testicles and a chief complaint of abdominal mass. Later, the patient underwent surgery, and the undescended testis was confirmed as a seminoma.[8]

They often do not exhibit symptoms and are incidentally detected during imaging examinations. The ultrasound, CT, and magnetic resonance imaging scans indicate the presence of a well-defined mass located in the retroperitoneal area or the pelvic region. The mass appears to be uniform in composition and does not show any signs of calcification or necrosis.[9] Before any surgical procedure, such as orchiectomy, it is necessary to conduct an additional assessment that includes the examination of serum tumor markers. Radical inguinal orchiectomy is a medical procedure that serves both as a treatment and as a means to get tissue for histological diagnosis.[10]

In this case, a patient with bilateral cryptorchidism presented with an abdominal mass complaint. After a clinical examination, there were also no palpable testicles found in this patient. Based on the imaging result, a surgical procedure was done and histopathology confirmed a seminoma of the right undescended testis. We conducted further evaluation of blood tumor markers and imaging assessments of the patient, which resulted in normal finding.

CONCLUSION

Seminomas are among the most common causes of testicular masses, particularly in undescended testis, which can manifest as abdominal mass. The presence of a rapidly growing mass in the abdomen with an undescended testis should alert the urologist to the possibility of a seminoma and the need for prompt diagnostic assessment and intervention. In addition, it is essential to perform regular scrotal examinations on all men who have an abdominal mass.

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