International Surgery Journal
Ranga H et al. Int Surg J. 2025 Oct;12(10):1863-1865
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: https://dx.doi.org/10.18203/2349-2902.isj20253049

Case Report

The disguised testis: a rare case of intra-abdominal seminoma presenting as a lower abdominal mass

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Received: 05 August 2025
Accepted: 10 September 2025

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ABSTRACT

Intra-abdominal undescended testes in adults are rare and often present as abdominal or pelvic masses, leading to diagnostic confusion with neoplasms such as gastrointestinal stromal tumors (GIST). Unrecognized cryptorchidism carries a significant risk of malignant transformation, particularly into germ cell tumors. Thorough clinical assessment, including genital examination, remains essential in such cases. A 55 years old male presented with progressive lower abdominal pain and a firm, non-tender mass in the left iliac fossa. There was no prior history of undescended testis or related surgery. Imaging studies, including contrast-enhanced CT, suggested a well-defined mass near the sigmoid colon, initially suspected to be a GIST. The patient underwent exploratory laparotomy for definitive diagnosis and management. Intraoperatively, a well-encapsulated, 6 cm mass was identified adjacent to the sigmoid colon. The lesion was excised completely without bowel involvement. Histopathological analysis revealed atrophic testicular tissue with intratubular germ cell neoplasia (ITGCN), confirming the mass as an intra-abdominal undescended testis with pre-malignant changes. This case highlights the diagnostic challenge posed by intra-abdominal undescended testes in adults. Awareness of this rare presentation, combined with careful genital examination, is crucial to avoid misdiagnosis and unnecessary extensive resections. Cryptorchidism should always be considered in the differential diagnosis of unexplained abdominal masses in males, regardless of age.

Keywords: Cryptorchidism, Abdominal neoplasms differential diagnosis, Germ cell neoplasms, Intra-abdominal testis, Testicular neoplasms pathology

INTRODUCTION

Cryptorchidism or undescended testis, is a relatively common congenital anomaly, affecting approximately 30% of premature male infants and 3-15% of full-term male infants.[2] If left untreated, it is associated with a significantly increased risk of infertility and testicular malignancy.[3] Among these, intra-abdominal testes carry the highest risk, with an estimated 10% chance of malignant transformation.[4] The most common malignancy arising in undescended testes is testicular germ cell tumor, with seminoma being the predominant histologic subtype, especially in the fourth decade of life.[5] Seminomas account for 60–65% of all germ cell tumors and are typically diagnosed earlier than their non-seminomatous counterparts.[6] Histologically, seminomas are classified into three types: classic, anaplastic and spermatocytic, each with distinct pathological and clinical behavior.[6]

Additionally, individuals with a history of germ cell tumors face a 2–3% risk of developing a second testicular malignancy.[7] We present a rare case of a seminoma arising in an undescended intra-abdominal testis, which initially mimicked a gastrointestinal stromal tumor (GIST). The patient, a 55 years old male, presented with a progressively enlarging, painful lower abdominal mass and a one-year history of dull abdominal pain, which acutely worsened over the preceding week and was associated with nausea.

CASE REPORT

A 55 years old male presented with a 4-month history of progressive abdominal pain and a palpable mass. On examination, the patient was stable with a palpable mass in the right iliac fossa. Blood tests revealed mild anemia. Ultrasound showed a heterogeneous mass. Contrast-enhanced CT revealed a 9.7×10.7×10.6 cm exophytic mass from the sigmoid further abutting the superior wall of urinary bladder, small bowel superiorly, iliopsoas laterally and rectus muscle anteriorly. Histopathology and immunohistochemistry confirmed spindle cell tumor with CD 117, $OCT_{3/4}$ and PLAP positivity.

Therapeutic intervention

An exploratory laparotomy was performed. The tumor was resected with adequate margins and end-to-end colocolic anastomosis was done along with adequate bladder resection and reconstruction. The intraoperative period was uneventful.

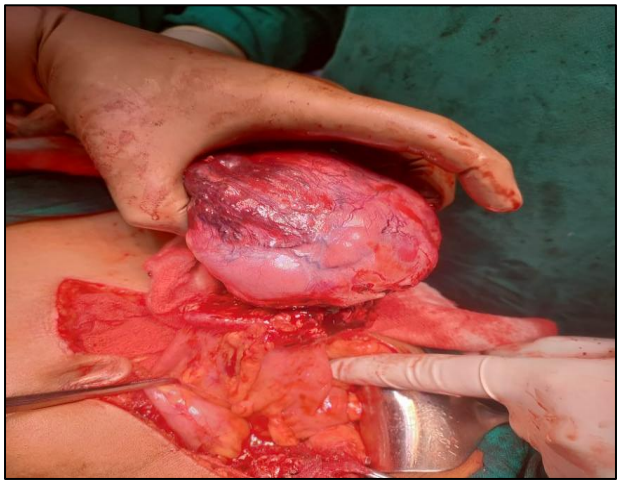

Figure 1: Intraoperative view showing the exophytic growth arising from the sigmoid.

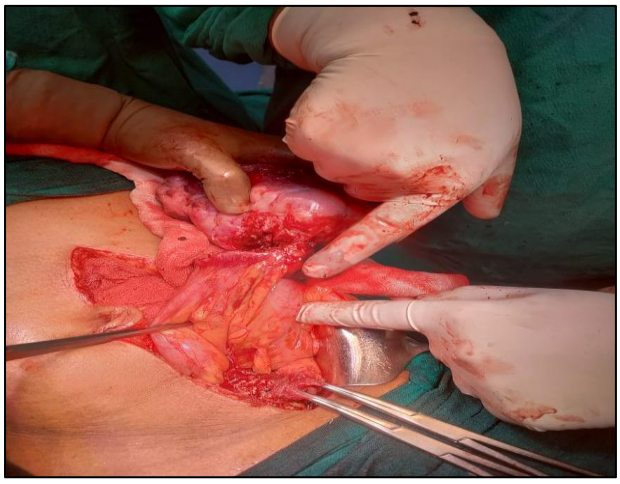

Figure 2: Intraoperative dissection showing tumor extension near the urinary bladder.

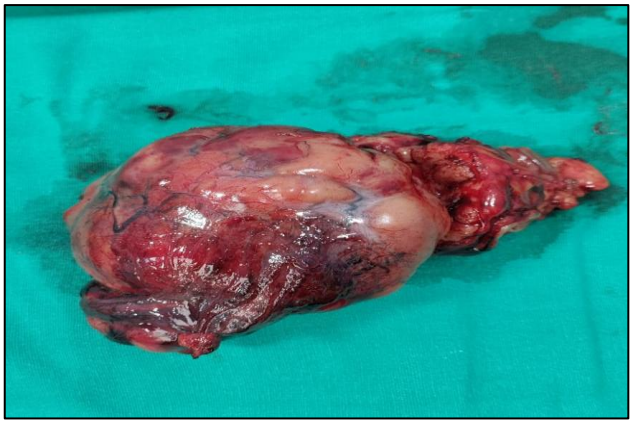

Figure 3: Mass excised from intestine.

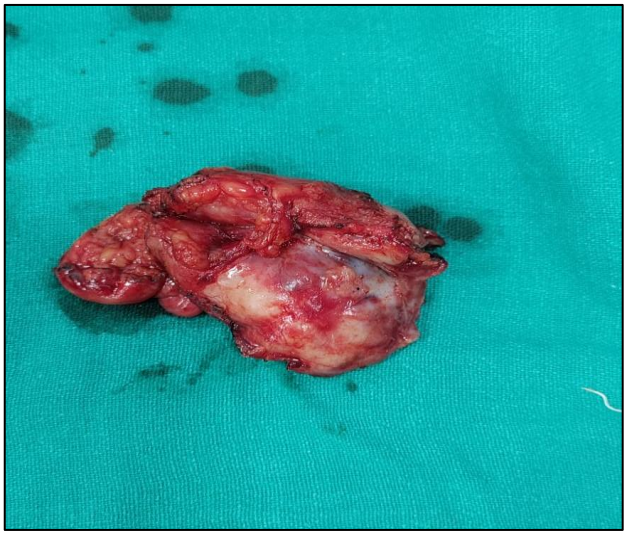

Figure 4: Mass excised from urinary bladder.

Intraoperative findings

During exploratory laparotomy, a large exophytic mass arising from the sigmoid was noted. The mass was found to be adherent to the urinary bladder. Intraoperatively, it was observed that the tumor had extended to the posterosuperior wall of the bladder. Complete excision of the tumor was carried out along with resection of the involved part of the bladder (5×5 cm).

Postoperative course

The patient had an uneventful postoperative recovery with and was discharged on postoperative day 11. Histopathology reports were found to have CD117, OCT ¾ and PLAP positivity along with dot like positivity for CK, indicative of a seminomatous germ cell tumor.

Follow-up course

The patient was advised biweekly follow up for postoperative care and concurrently at the department of radio oncology for radiotherapy.

DISCUSSION

Cryptorchidism is one of the most common congenital anomalies in males, defined by the failure of one or both testes to descend into the scrotum.[2] While typically diagnosed and corrected in childhood, in rare cases especially in resource-limited settings or due to lack of awareness it may go undiagnosed well into adulthood.[9]

This case highlights the rare but significant risk of malignant transformation of an intra-abdominal undescended testis into seminoma, which is the most common tumor type arising in such testes.[5] The risk of testicular cancer is estimated to be 10 times higher in undescended testes compared to normally descended ones, with intra-abdominal locations carrying the greatest risk.[3,4] The initial clinical and radiologic impression in this case was of a sigmoid GIST, based on imaging and the presence of a spindle-cell tumor.[8] GISTs are the most common mesenchymal tumors of the GI tract and often present with vague symptoms such as pain or mass. However, an important clinical clue the absence of the left testis in the scrotum was missed. A detailed genital examination could have raised suspicion for an undiagnosed cryptorchidism. In adult males with unexplained abdominal masses and an absent testis, intra-abdominal cryptorchidism with malignant transformation should always be considered in the differential diagnosis.[2,9]

Histopathological examination confirmed atrophic testicular tissue with seminomatous features, consistent with an intra-abdominal seminoma.[6] Seminomas are typically slow-growing, radiosensitive tumors. Classic seminoma composed of large, clear cells with prominent nucleoli is the most common variant.[6] Interestingly, the patient's presentation in the fifth decade is atypical, as most seminomas occur between the ages of 30–40.[5] The acute worsening of symptoms may have been due to tumor necrosis or mass effect.

Surgical resection is the mainstay of treatment, with further management based on tumor staging and risk factors.[5,10] Our patient underwent successful complete resection and was referred for oncologic evaluation.

CONCLUSION

This case underscores the critical importance of including genitourinary anomalies such as undescended testis in the differential diagnosis of abdominal masses in adult males. Though rare, intra-abdominal cryptorchidism carries a high risk of malignant transformation, most often into seminoma.[3-6] A complete clinical evaluation, including genital examination, is essential to prevent misdiagnosis and delays in treatment. Early diagnosis and surgical management of undescended testes during childhood remain vital in preventing long-term complications such as infertility and testicular cancer.[2,4,9]

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Ranga H, Vaishnavi, Sharma L, Singla R, Yadav DK. The disguised testis: a rare case of intra-abdominal seminoma presenting as a lower abdominal mass. Int Surg J 2025;12:1863-5.