

Colorectal Metastases to Undescended Testis – A Diagnostic Enigma

Rai A, Singh SK, Ahmad S, Dhivakar S*, Sharma J and Katragadda S

Department of General Surgery, All India Institute of Medical Sciences, Rishikesh, India

*Corresponding author:

Dhivakar S, Junior Resident,
Department of General Surgery, All India
Institute of Medical Sciences, Rishikesh, India,
E-mail: kishankis94@gmail.com
ORCID ID : 0000-0003-1772-8711

Received: 01 Jan 2023

Accepted: 13 Feb 2023

Published: 20 Feb 2023

J Short Name: COS

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Keywords:

Testicular cancer; Metastases; Cryptorchidism;
Colorectal cancer

Citation:

Dhivakar S. Colorectal Metastases to Undescended Testis – A Diagnostic Enigma. Clin Surg. 2023; 9(1): 1-3

1. Abstract

Isolated testicular metastasis in colorectal carcinoma is rare and is generally encountered in the setting of a disseminated malignancy. Undescended testis increases the risk of primary testicular carcinoma. We report an unusual case of anorectal carcinoma with isolated metastasis to the undescended testis.

2. Introduction

Primary testicular neoplasm is a relatively uncommon malignancy, accounting for less than 1% of all male tumors [1]. Cryptorchidism is a well-established risk factor with a relative risk between 4-6 in the affected testis and 1.74 in the contralateral testis [2,3]. Non-lymphomatous metastases to the testis is extremely rare with the majority of primary from the prostate (35%) followed by lungs (18%), melanoma (18%), and kidney (9%) [4]. Colorectal metastases to testis account for 8% of cases with less than 25 reported cases [4,5].

We report a rare case of colorectal malignancy metastasizing to undescended testis in an adult male.

3. Case Presentation

A 38-year male presented with complaints of altered bowel habits for 1.5 years and anal pain during defecation for 2 months along with significant loss of weight. There was no history of bleeding per rectum, tenesmus, or fecal incontinence. On examination, the abdomen was distended with a tympanic note throughout and no signs of peritonitis. Rectal examination revealed an irregular, circumferential growth extending proximally from ~ 2cm above the anal verge, which was extremely tender to allow any further evaluation. Examination of the external genitalia revealed a poorly developed and empty right scrotal sac while the left hemi-scrotum

was well developed with a normally palpable left testis.

The patient was further evaluated with cross-sectional imaging using a Computed Tomography (CT) scan which showed a ~ 4x2.3cm heterogeneously enhancing mass in the right inguinal canal reaching upto the superficial inguinal ring along with multiple heterogeneously enhancing round enlarged lymph nodes at B/L external, internal and common-iliac stations, pre/para-aortic, aortocaval, retrocaval stations and along gastrosplenic ligament. Similar enlarged mediastinal and bilateral hilar lymph nodes were also seen, the largest measuring ~2.2cm in MSAD at the AP window. A circumferential edematous mural thickening was seen involving the anal canal and rectum for a length of ~6cm with a maximum thickness of ~10mm which was suggestive of inflammatory etiology. Serum AFP, β -HCG, LDH, and CEA were sent, of which β -HCG (3.8mIU/mL) and LDH (554U/L) were significantly elevated.

Based on the clinical presentation and imaging findings, a provisional diagnosis of metastatic right testicular neoplasm with inflammatory anal stricture was made.

The patient underwent right high inguinal exploration and trephine sigmoid colostomy along with a biopsy from the anal stricture. Post-operatively he developed deep incisional Surgical Site Infection (SSI) which improved with conservative treatment.

Histopathology of the anal growth biopsy was suggestive of a poorly differentiated mucin-secreting adenocarcinoma of anal canal, while right orchiectomy specimen showed features of metastatic poorly differentiated adenocarcinoma which was positive for PanCK, EMA, CK20, CDX2, and synaptophysin and negative for CD56 and INSM1 (Figure 1).

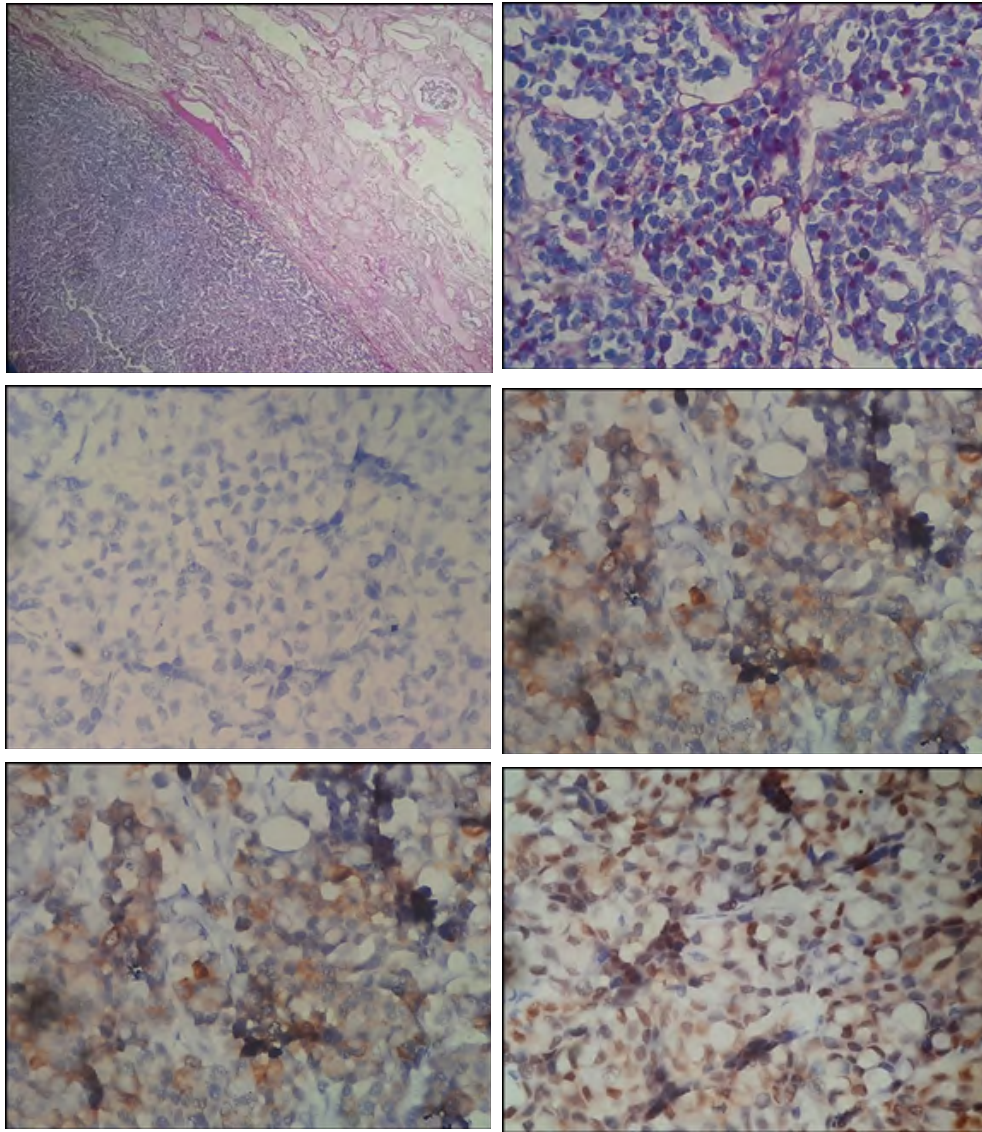


Figure 1: (a) CDX2 40x; (b) PanCK 40x; (c) PAS 40x; (d) CK 7 40x; (e) HE 20x; (f) CK20 40x.

4. Discussion

Cryptorchidism has an incidence of 2-5% and is a predominant risk factor associated with testicular malignancy [6]. Adenomatous appearance in testicular biopsy is rare and warrants a thorough evaluation for primary as early identification may alter the treatment plan and hence survival. Testicular metastases arise commonly from prostate, lung, and melanoma. Colorectal cancer metastasizes most commonly to the liver followed by the lungs, brain, and peritoneum with the worst prognosis associated with CNS (4 months) and skeletal disease (5.5 months) [7]. Colorectal metastases to the testis are extremely rare with the majority of cases presenting with testicular swelling or hydrocele at a mean age of 18-73 years [8].

Colorectal malignancy with testicular metastasis is extremely rare with less than 25 reported cases. The most commonly accepted

theory of testicular metastasis involves communicating channels between the testis and peritoneum [9]. Alternative theories involve retrograde venous and lymphatic extension, direct invasion, and arterial embolism [10].

A provisional diagnosis of metastatic testicular malignancy was made in this case in view of the undescended testis with a classic pattern of retroperitoneal and mediastinal lymphadenopathy and long duration and benign features of anal stricture on imaging. The absence of metastases to the liver or lungs, typical of colorectal malignancy and retroperitoneal and mediastinal disease in this patient further added to the diagnostic enigma.

5. Conclusion

Colorectal metastases to the testis are a rare presentation and present an extremely poor prognosis.

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