

Intestinal Obstruction Secondary To Undescended Testis

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Abstract:

Small bowel obstruction caused by cryptorchidism is extremely rare, especially in adults. Despite being reported, bowel obstructions in cases of cryptorchidism typically occur as a side effect of malignant transformation. This is a case of a 33 year old man, who presented with abdominal symptoms, and upon further examination revealed bilateral undescended testes in the abdomen. The obstruction of the small bowel loops in this case was due to congenital bands near the left testes, which on histopathological examination revealed seminoma changes.

Keywords: Small bowel obstruction, cryptorchidism, bilateral testes, seminoma, torsion

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I. Introduction:

Small bowel obstruction (SBO), a common complication following abdominal surgery, is the disruption of the normal movement of intestinal contents in the small bowel. Numerous pathologic processes can result in small bowel obstruction, but intra-abdominal adhesions are the most common cause in the developed world. Small bowel obstruction is most frequently brought on by postsurgical adhesions. [1] Hernias in incarcerated people are the second most frequent type. Malignancy, Crohn's disease, stool impaction, foreign substances, and volvulus are a few other common aetiologies. By obstructing blood flow, strangulated small bowel obstruction can cause necrosis, ischemia, and intestinal rupture. [2]

One of the rare causes is cryptorchidism or undescended testes in both children and adults. 3% of newborns who were born at full term have cryptorchidism. [3] Rarely, testicular torsion, cancer, or rupture have all been linked to cryptorchidism as causes of acute abdomen in the literature. [4] If the cryptorchidism is not corrected in a timely manner, it would result in severe cases of SBO in the adults. Cryptorchidism as a cause of small intestinal obstruction, however, is surprisingly uncommon given its rarity. [5] So, this case report was produced describing a small bowel obstruction in an adult male patient with a bilateral non-malignant cryptorchidism.

II. Case Report:

A 33 year old male patient has presented to the casualty with the complaints of pain abdomen with distension for the past 2 days. There were associated symptoms of vomiting and obstipation. There was no history of fever, loss of weight or appetite. The patient was conscious and well oriented, with normal vitals and no lymphadenopathy.

Upon abdominal inspection, there is fullness in lower abdomen at the supra-pubic region. There was a step ladder pattern of peristalsis present too. Palpation revealed the tenderness in the lower abdomen. A mass of size 10cm vertically and 8cm horizontally was palpated in the hypogastrium, which extended upto the umbilicus. Lower border of the mass can be made out, and it was a mobile mass with firm to hard consistency, but no tenderness. When percussion was done, there were notes of dullness over the mass. Bowel sounds were increased on auscultation of the abdomen. Further examination of external genitalia showed absence of testes bilaterally, and the scrotum was incompletely developed, and the penis is in central position normally. Per rectal examination was also normal.

The patient was then sent for ultrasound, where a well-defined hetero-echoic mass lesion in the midline extending from umbilicus to hypogastric region measuring 8.5 x 9.2 cm was identified. Within the mass, both peripheral and central vascularity was noted. Both the testes was absent from scrotal sac, and the right testis was visualized adjacent to the deep ring, but the left testis could not be visualized. Contrast enhanced computed tomography (CECT) was advised, and with it, found a heterogenous enhancing mass lesion approximately 10.3 x 9 x 8 cm in the pelvis in between the iliac vessels. Dilated jejunal and ileal loops were noted. Blood testing revealed a significant finding of high levels of beta HCG at 26.42 IU/ml, and alpha-fetoprotein at 1.94 ng/ml.

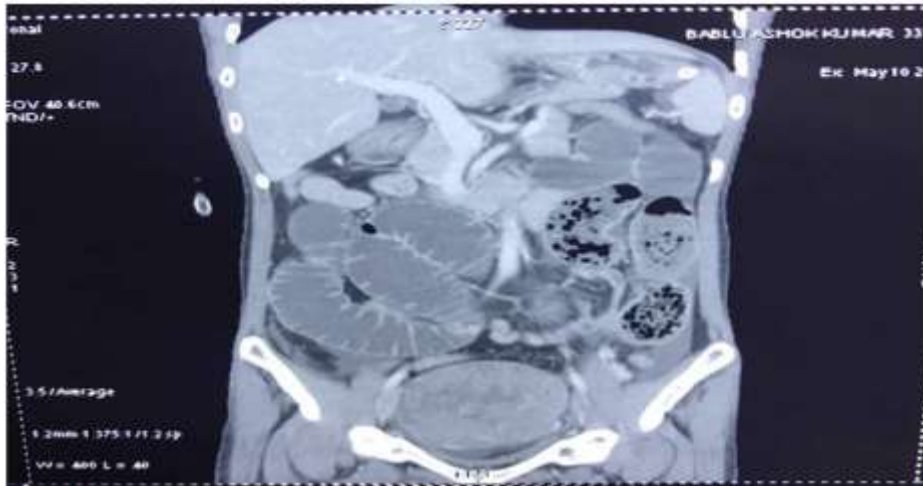


FIGURE 1: CECT Showing Bowel Obstruction

The patient was posted for surgery for removal of the mass. Intraoperatively, there was a mass in the lower abdomen, which turned out to be left testis measuring 10 x 9 cm. The right testis was found at deep ring with the testicular vessels engorged and dilated. There were two congenital bands present in relation to the enlarged left testis causing obstruction of small bowel loops. Because of that, the bowel was congested and edematous. There was no free fluid in the peritoneal cavity and there were no enlarged lymph nodes. Initially, the congenital bands were divided releasing the obstruction to the bowel, and immediately the bowel returned to normal colour and texture. The testicular vessels were ligated and gubernaculum was divided. The left and right sided testicular specimens were excised and sent for histopathological examination. There were features suggestive of seminoma with high mitotic index in the left testis. Whereas the right testis showed features consistent with cryptorchid testis, but no evidence of malignancy. The patient was discharged with standard treatment, and the follow up showed no further complications.

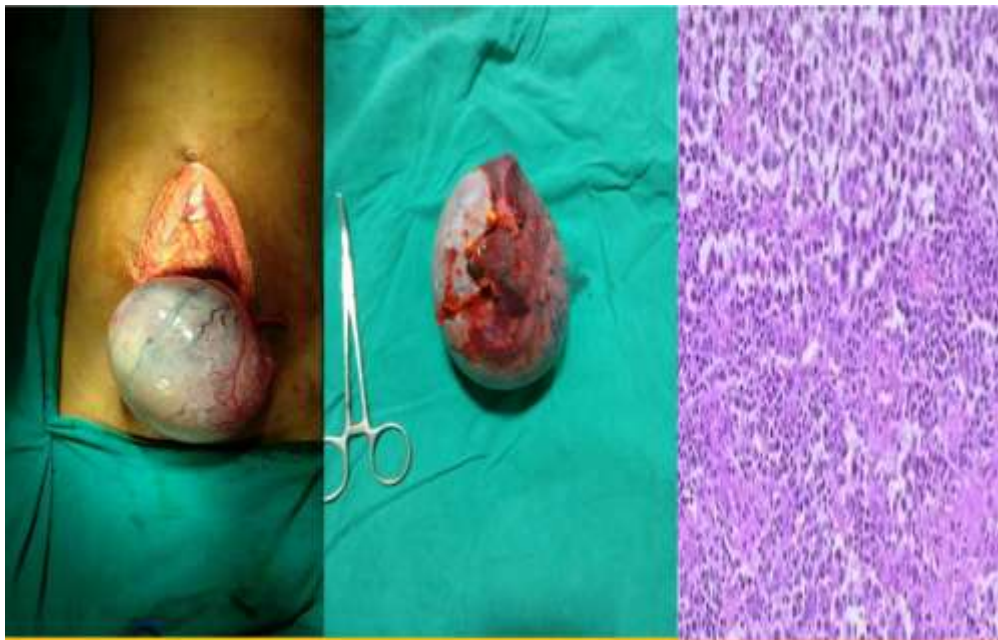


Figure 2: Orchidectomy procedure and histopathological analysis of the left testis.

III. Discussion:

An undescended testis sometimes called as cryptorchid testis can be found in 3% of the term newborns and 0.5–1.0% of adults. A research by petterson et al demonstrated that individuals who had corrective surgery after the age of 13 had incidence rate of 5.4% and 2.23% before 13 years. [6] Surgery is necessary due to the risk of trauma, torsion, infertility, and cancer. However, adults can be diagnosed with cryptorchidism, and orchiectomy is the preferred treatment if fertility is not a concern. [7] In our case report, it was understood that

the patient had never sought treatment for sexual, urinary or reproductive issues. And that's why there was a significant delay in diagnosing the condition.

Mishra et al identified an unusual case of cryptorchidism in a 16 year old with a non-malignant cryptorchid testis as a cause of strangulated intestinal obstruction. [8] It is very rare to have cryptorchidism as the non-malignant etiology for the bowel obstruction. Kim et al also observed a case of 67 year old man with SBO which is caused by adhesions between an undescended testis and the terminal ileum. There was no malignancy in this case of unilateral cryptorchidism as well. [9]

The paraduodenal region is where intestinal obstructions most frequently develop (about 50% of the time), although they can also occur in the transmesenteric, pericecal, intersigmoid, and supravescicular regions. [10] Intestinal obstruction due to internal herniation is rare, reported in only 1% of the patients. In our case, the obstruction was due to congenital bands. About 5%-20% of patients with cryptorchid testis were known to develop a testicular tumour on the opposite side. [11] But there is no malignancy or strangulation in our case report, which led us to believe that the sooner the diagnosis, sooner the prognosis. This case necessitates the importance of diagnosing cryptorchidism early and the benefits of orchidectomy in preventing unfavourable complications in the adults.

IV. Conclusion:

The abdominal cryptorchidism is a rare condition in the adults, and carries high risk of malignant transformation to seminoma apart from internal herniation in various retroperitoneal areas. Hence, it is recommended that in patients with acute abdominal symptoms, undescended testes should be considered.

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