

Torsion Of Vermiform Appendix: A Case Report

S Suggala, E Gopi, M Sreejayan, M Sasi

Citation

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Abstract

Torsion of the vermiform appendix is an extremely rare condition. The abdominal symptoms and signs of this condition are indistinguishable from acute appendicitis. Torsion of the vermiform appendix was first described by Payne et al. in 1918. Only 32 cases (25 primary, 7 secondary) have been described in the literature.

INTRODUCTION

The appendix develops as an out-pouching of the caudal limb of the midgut loop in the sixth week of human development and by the fifth month it assumes its vermiform shape. Its length averages 9cm (1-20cm). Acute appendicitis is one of the most common causes of acute abdomen encountered. Torsion of the appendix is a very rare entity encountered in the surgical practice. The diagnosis is similar to acute appendicitis preoperatively, with the condition being discovered intra-operatively more often. Torsion of the appendix can occur at any age (3-60 years). There are two subtypes: primary and secondary torsion. Here, we report a case of torsion of vermiform appendix.

CASE REPORT

An 18-year-old male presented to our emergency department with a history of abdominal pain for the past two days. The pain was localized to the right iliac fossa. He had 3 episodes of vomiting. The patient also complained of anorexia. There was a previous history of a similar episode which had subsided with conservative treatment at a local hospital. On physical examination, he was febrile, his pulse rate was 96 beats/minute, and his blood pressure 130/80mm of Hg. His bowel sounds were sluggish. There were rebound tenderness and guarding in the right lower quadrant of the abdomen. Rovsing's test was positive. Psoas and obturator test were negative. The complete blood count showed: WBC 18500 (86% neutrophils, 11.1% lymphocytes, 2.9% monocytes). Hemoglobin (13.8), Hematocrit (41.45%), serum electrolytes (sodium 139, potassium 4.4), renal function tests (blood urea 24, serum creatinine 1.1), random blood sugar (134) and urine routine test were within normal limits. HIV, HBsAg and AntiHCV markers were negative. Abdominal X-ray was

within normal limits. A clinical diagnosis of acute appendicitis was made. The patient was prepared for surgery after taking informed consent. The abdomen was opened through a gridiron incision. Intraoperatively, the greater omentum was adherent in the right iliac fossa which was divided by putting serial hemostatic clamps. There was around 50ml of purulent fluid in the right iliac fossa. The appendix was grossly distended and inflamed. It was 8cm long and precaecal in position. The base of the mesoappendix was noted to be narrow. The caecum was mobilized and it was noted that there was a torsion just distal to the base of about 270 degrees. The appendix was detorted in clockwise direction. An appendicectomy was done. The appendix was found to be distended with purulent secretions. A drain was put and the abdomen was closed in layers. The post-operative period was uneventful. Histopathological examination revealed a gangrenous appendix. Culture and sensitivity of the purulent fluid revealed pseudomonas growth sensitive to amikacin and levofloxacin.

Figure 1

Figure 1: Inflamed appendix



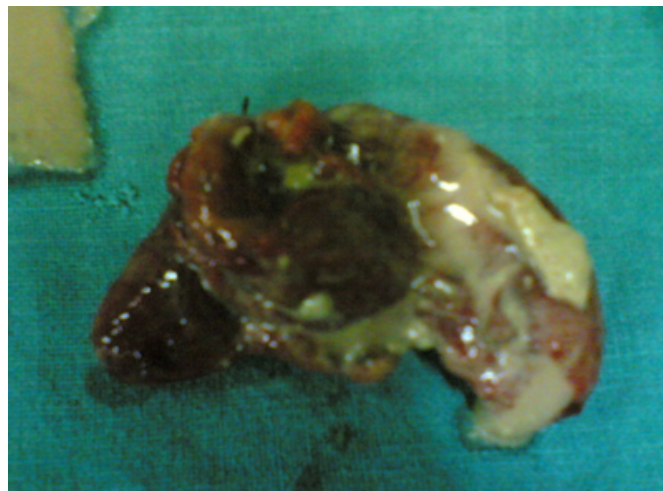
Figure 2

Figure 2: Torsion near the base



Figure 3

Figure 3: Distended appendix with purulent secretions



DISCUSSION

Torsion of the vermiform appendix is a rare clinical entity. Only 32 cases have been described in the world literature since its first description by Payne et al. in 1918¹. The features which are associated with torsion of appendix include long appendix, pelvic position of the appendix, appendiceal tumors and strenuous physical exercise. The direction of rotation can be clockwise or counterclockwise (as in this case). The site of the torsion can be variable either at the base or 1cm distal to the base. In our case, it was well within 0.5cm distal to the base. The torsion has been described as primary or secondary in nature. In the primary etiology the proposed factors leading to the torsion are long appendix, fan-shaped mesoappendix with a narrow base, absence of azygotic folds which attach the appendix laterally². In the secondary etiology cystadenoma³, mucocoele, lipoma, fecolith and inflammation causing its distension and rendering it unstable and more likely to twist have been proposed⁴. Intermittent appendiceal torsion has been proposed to cause recurrent right iliac fossa pain in some children⁵.

In our case both, primary and secondary factors are involved⁶. The mesoappendiceal base was narrow and the appendix was distended with purulent secretion. The triggering factors were repeated bouts of inflammation with consequent distension of appendix with purulent secretion and the narrow base also contributed to the torsion. The case is unique in its presentation because of its rarity and also because both the primary and secondary factors were involved in its etiology.

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