



Clinical importance of an unusual peritoneal band connecting the ileum to the anterior abdominal wall

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Abstract

Peritoneal variations frequently occur in humans. We report a rare type of peritoneal band which looked like persistent vitelline duct at the first glance. This tubular peritoneal band extended from the mesenteric border of ileum to the anterior abdominal wall close to the umbilicus. The band looked like an extension from ileum but upon sectioning the band we saw a bit of adipose tissue and a few blood vessels in it. We discuss the clinical importance of this band.

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Introduction

The peritoneum is the largest serous membrane of the body and is very complexly arranged in the abdomen. It has a visceral layer that covers the abdominal viscera and a parietal layer that covers the inner aspect of abdominal walls. The peritoneal cavity lies between the two layers and is divided into several compartments by the abdominal organs. The peritoneum forms several folds through which the blood vessels and nerves travel to the viscera. The arrangement of the peritoneal folds and spaces determine the direction of flow of peritoneal fluid and spread of the infection from one place to the other. Most of the peritoneal folds are formed during the development of the embryo. Some unusual folds may be formed during fetal life or as a result of adhesions in the postnatal life. Unusual peritoneal bands might cause various problems. We report here a rare type of unusual peritoneal band.

Case Report

During routine dissection classes for the first year Medical students, an unusual peritoneal band was noted in an approximately 65-year-old male cadaver. One end of the band was attached to the mesenteric border of the ileum

and the other end to the anterior abdominal wall, close to the umbilicus (Figures 1, 2). The band was pinkish in color and had a rounded outline. It was attached to the ileum at approximately 8-9 cm from the ileocaecal junction. The length of the band was 10.5 cm. When we sectioned the band; it appeared to have a lumen containing some adipose tissue and a few blood vessels (Figure 2). There was no musculature found in the band. The other organs in the abdomen appeared to be normal.

Discussion

Unusual peritoneal bands are frequently seen in the abdomen and most of them go unnoticed throughout lifetime but a few of them may cause serious problems like intestinal obstruction during any time of life. Commonest among the peritoneal bands that cause the intestinal obstruction is known as Ladd's band. It extends from the caecum to the abdominal wall. Mongardini et al., have reported a case of intestinal obstruction and infarction in a 64-year-old male patient due to the Ladd's band [1]. Malrotation of intestine is one of the causes of intestinal obstruction in children. But a rare case of intestinal obstruction due to situs inversus and malrotation due to the presence of a Ladd's band in an adult

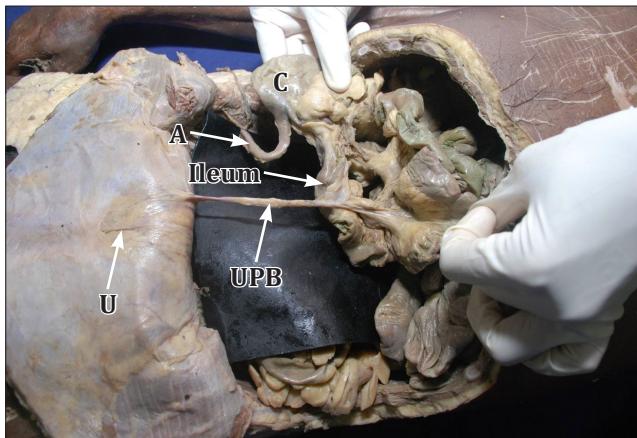


Figure 1. The anterior abdominal wall has been reflected downward to show the unusual peritoneal band. (U: umbilicus; A: vermiform appendix; C: caecum; UPB: unusual peritoneal band)

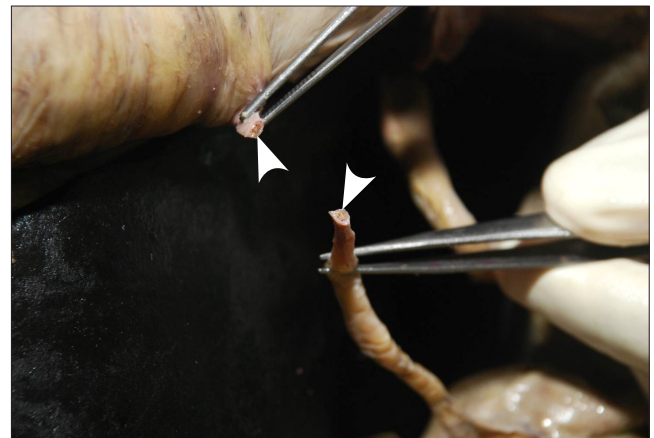


Figure 2. The unusual peritoneal band is cut to observe its contents. The lumen of the band (arrowheads) have adipose tissue and a few blood vessels.

has been reported [2]. At present, laparoscopic surgery is the effective treatment for malrotation or obstruction due to Ladd's bands [3]. There are reports on other peritoneal folds/bands extending from abdominal viscera to the abdominal wall. Sukry et al., have reported a case of acute abdomen caused by an ommental band [4]. Wayne and Burrington have found congenital peritoneal bands in 39 out of 64 children with extrinsic obstruction of the duodenum [5]. Unusual peritoneal folds connecting the stomach, liver, gallbladder and colon have also been reported [6, 7].

The band that we are reporting here may be regarded as the degenerating omphalo-mesenteric duct since it is extending from the ileum to the anterior abdominal wall, close to the umbilicus. Mahato has called a similar band as obliterated fibrous omphalo-mesenteric duct [8]. The band in our case

did not have musculature in its wall and it was attached to the mesenteric border of the ileum and was just 8-9 cm away from ileocaecal junction. The degenerating omphalo-mesenteric duct or Meckel's diverticulum when present, should be attached to the antimesenteric border of the ileum and should be about 2 feet away from the ileocaecal junction. The band that we are reporting here had adipose tissue and a few blood vessels in its lumen. So we thought that it is appropriate to consider it as a peritoneal band though the color of the band was not in favor of this. This band can be named as "ileo-umbilical band" and it might cause intestinal obstruction similar to that caused by a Ladd's band. Since the band is vascular, surgical division of such a band might result in some bleeding during the procedure. To best of our knowledge, a peritoneal band similar to this has not been reported yet.

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