An unusual case report - longest appendix in India (20.5 cm)

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ABSTRACT

Introduction: The vermiform appendix is an organ that can have variable sizes, locations as well as functional potentials. Appendicitis is the most common surgical emergency, but its diagnosis can be a challenge to the treating surgeon. A 25 years-old male was admitted to the surgical ward with a right sided abdominal pain. The initial clinical presentation was vague. He underwent an appendicectomy which revealed a very long appendix. About half of the adult patients with appendicitis present with the known classical signs and symptoms, but the clinical scenario might be occasionally completely different usually due to varying appendicular tip position. We describe here the longest and largest appendix removed in India to date, measuring about 20.5 cm in length.

Keywords: Appendix, male, long, emergency.

INTRODUCTION

The appendix (or vermiform appendix; also cecal [or caecal] appendix; also vermix) is a blind-ended tube connected to the cecum, from which it develops embryologically. The cecum is a pouchlike structure of the colon. The appendix is located near the junction of the small intestine and the large intestine. The term “vermiform” comes from Latin and means “worm-shaped”. It is highly diverse in size and shape.[1] The well known clinical picture of appendicitis includes a right lower abdominal pain, nausea, vomiting and a high temperature. The vermiform appendix can vary in size and shape.[1] The well known clinical picture of appendicitis includes a right lower abdominal pain, nausea, vomiting and a high temperature. The vermiform appendix can vary in size and shape.[1] The well known clinical picture of appendicitis includes a right lower abdominal pain, nausea, vomiting and a high temperature. The vermiform appendix can vary in size and shape.[1] The well known clinical picture of appendicitis includes a right lower abdominal pain, nausea, vomiting and a high temperature. The vermiform appendix can vary in size and shape.[1] The well known clinical picture of appendicitis includes a right lower abdominal pain, nausea, vomiting and a high temperature. The vermiform appendix can vary in size and shape.[1] The well known clinical picture of appendicitis includes an A 25 years-old boy was admitted to the surgical ward for an acute abdominal pain which had been present for 1 day. The pain was constant, dull, on the right side of the abdomen, from the right upper quadrant to the right iliac fossa. His appetite was poor. His bowel function was normal. On clinical examination, his pulse rate was 100/minute, blood pressure 128/72 mmHg and was febrile with a temperature of 37.5°C. He had a tender right upper quadrant and right iliac fossa. There was no guarding. Rebound tenderness was present. Blood tests showed total white cell count of $14.00 \times 10^9 / L$, neutrophils $10.58 \times 10^9 / L$. All other blood tests were normal. Urinalysis did not reveal anything significant. The clinical picture on initial examination was clear. A decision was made to proceed for an appendicectomy. A muscle splitting Lanz incision was made in the right iliac fossa. The cecum was in the right iliac fossa. The appendix was

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inflamed and paracaecal in position. It was very long and after one coil was going superiorly. The tip of the appendix reached the subhepatic area. After dividing the mesoappendix, it measured 20.5 cm in length (Figure 1 & 2). The appendicectomy was performed. Postoperatively the patient did well. The histopathology report was of acute appendicitis. The patient went home after two days.

DISCUSSION

The appendix is a long, thin diverticulum arising from the inferior tip of the caecum. It is lined with colonic epithelium with interspersed submucosal lymphoid follicles. Its function is unknown, although its lymphatic tissue and secretion of immunoglobulins suggest that it may play a specialized role in the immune system. The length and position of the appendix can vary considerably which many a times poses a diagnostic dilemma, especially in a young paediatric patient. Though the position of the base of the appendix in relation to the caecum is essentially constant (McBurney’s point), the location of its free tip is highly variable. It may be retrocaecal (28%–68%), pelvic (27%–53%), paracaecal and paracolic, anterior or pre-ileal (1%), post-ileal, within a hernial sac (2%), or the caecum itself may lie in the subhepatic position because of the arrest of its descent (4%).

The average length of the appendix is 4.5 cm in neonates and 9.5 cm in adults, but this may vary between 2 cm to 20 cm. The longest appendix reported in the literature measured 26 cm removed from 72 year old during an autopsy in Croatia in 2006 (Guinness World Records). Raschka S, et al. found that the appendix length correlated highly significantly with body weight in his study of 167 patients who underwent appendicectomies. Fifty percent of adults present with the classical scenario of periumbilical pain, nausea, migration of pain to the right lower quadrant, and later vomiting with fever. This is less common in children as many of the presenting features in appendicitis are age dependent. Arrested caecal descent occurs where the caecum lies in the subhepatic position but does not descend to the right iliac fossa. As a result of that, an inflammation of a subhepatic appendix can mimic cholecystitis, and perforation of a subhepatic appendix can mimic liver abscess.

Our young patient had an unusually long appendix of 20.5 cm, making it longest in India. Previous reported longest appendix was by Dr. Adeesh Jain. Although the caecum was in the right iliac fossa, the very long appendix lied along the entire length of ascending colon with its tip reaching the subhepatic area. This resulted in pain and tenderness along the whole of the right flank, from the right upper quadrant to the right iliac fossa. This did cause diagnostic uncertainty.

With ultrasound scan, raised inflammatory markers and leukocytosis prompted surgeon to undertake an emergency appendicectomy. Tip of this long appendix could have lied far away in the left iliac fossa, central abdomen or even the left upper quadrant causing more diagnostic problems.

CONCLUSION

A long appendix is associated with diagnostic problems by virtue of its inflamed tip reaching a faraway location (e.g. right upper, left lower, rarely left upper quadrant of abdomen). The treating surgeon should bear this in mind, since a delay in diagnosing and making the decision to operate results in an increased risk of perforation and morbidity. However we are reporting a case of 20.5 cm long non-perforated appendicitis.
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Competing interests

The authors declare that they have no competing interests.

REFERENCES