

Mega-appendix: A case report of an unusually long appendix

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Abstract

The appendix is an organ that varies in size, location, and functional potentials. Acute appendicitis is often one of the commonest cause of patients presenting with an acute abdomen in the emergency department. The management of choice for an acute appendicitis is open or laparoscopic appendectomy, thus, considered as the typical emergency surgery performed. The length of an appendix varies from 6 to 9 cm while the diameter varies from 7 to 8 mm. The largest reported length of the appendix is 55 cm. We hereby present a case of a mega appendix removed in Dadeldhura hospital till date, measuring approximately 18 cm in length.

Keywords: acute appendicitis; appendectomy; emergency surgery

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Introduction

With the incidence of 1.17 per 1000, acute appendicitis is considered as the most frequent surgical emergency that is reported globally. Young adults and adolescents report the highest incidence of acute appendicitis while the lifetime risk for male is 8.6% and for female is slightly low at 6.7%.¹ Even though a common pathology, appendicitis pose as a diagnostic challenge for surgeons, especially in the pregnant women. Furthermore, a negative appendectomy rate of 15 to 30% results from clinical diagnosis alone.^{2,3} Different scoring systems have been developed for diagnosing acute appendicitis, and the most commonly used is the Alvarado score.⁴ Measuring about 6 to 9 cm in length, human appendix is reported to be longer in males when compared to females.¹⁰ In this

instance we report a case of an appendix of 18 cm long which is considered as a mega appendix.

Case Report

A 45-year-old male was brought to Dadeldhura Hospital in the emergency room in an ambulance. The chief complaint of the patient was pain in the right iliac fossa for 5 days and it was associated with loss of appetite, vomiting, nausea and high-grade fever. Bowel and bladder habits were reported to be normal. During his physical examination, he had an axillary temperature of 101.4° F and the remaining vitals were within normal limit. During palpation rebound tenderness along with guarding were present in the right iliac fossa. His hernial orifices were examined and were found to be intact, and bowel sound was present in auscultation.

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A radiologist did the abdominal ultrasonography, which revealed an appendix with signs of inflammation and with the features of early lump formation, and his blood workup showed a total white blood cell count of 16000/ mm³. His symptoms and the investigations led to the diagnosis of acute appendicitis. An emergency open appendectomy was planned, and he was shifted to the operating room. Aseptic condition was maintained, and a gridiron incision was given under subarachnoid block. Exploration of the abdomen revealed an inflamed retrocecal appendix with a lump formation, which was dissected and separated. An appendix measuring approximately 18 cm in length was discovered, which was measured using a metal scale. During gross examination of the specimen a perforation was observed at the shaft of the appendix, as shown in Figure 1.

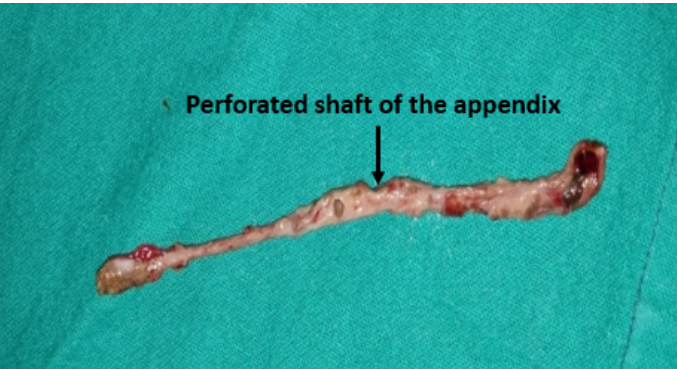


Figure 1: Appendectomy specimen with perforation in the shaft

It was sent for histopathological examination to the department of pathology. H/E staining of the specimen showed inflammatory cell infiltrates comprising predominantly neutrophils in the muscularis layer, suggestive of acute appendicitis, as shown in Figure 2.

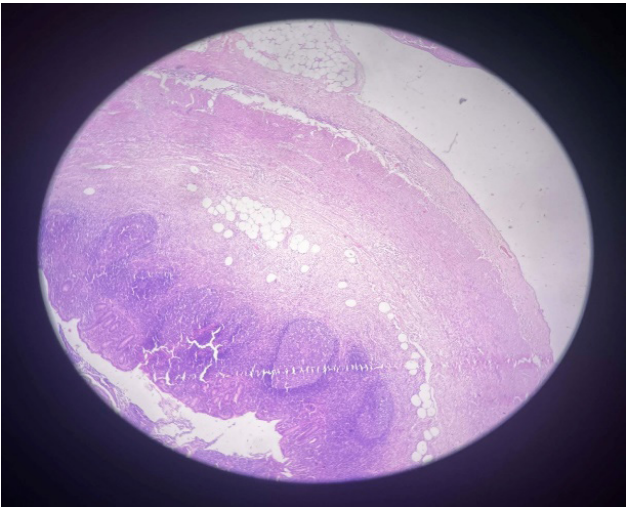


Figure 2: HPE of the resected specimen showing inflamed appendicular tissue with predominant neutrophil infiltration (40X. H&E stain)

After an uncomplicated postoperative hospital stay he was discharged on the third postoperative day. He was followed up on the seventh post-operative day, and recovered without any complications.

Discussion

The most common position of the appendix reported so far is retrocecal which is followed by pelvi, and the size and site also vary.⁵ The appendix is considered as constant structure but sometimes complete absence of appendix have been reported, and to add, sometimes even a double appendix may be present.⁶ One of the major cause of acute appendicitis is obstruction of the lumen which may result from inspissated stool (fecolith or appendicolith), lymphoid hyperplasia, vegetable matter or seeds, parasites, and neoplasm.⁷ Among the microbes associated with acute appendicitis, *Escherichia coli* and *Bacteroides fragilis* are reported to be the most common.^{7,8}

Charles McBurney first described the site of maximum tenderness along with other classic clinical presentation of acute appendicitis.⁹ The human appendix usually measures about 6 to 9 cm in length and is and the longest appendix reported so far was 55 cm, excised boy of 13 years.¹⁰ The CT scan was used to confirm the diagnosis in the case reported by Samaha et al,¹⁰ whereas in our case, the diagnosis of acute appendicitis was done based on the clinical findings, ultrasonography, and blood investigations that led to the emergency exploration. The average length of appendix was found to be 8.67± 2.44 cm where the maximum length was 14.7cm in a study done bu Khatun et al. in Nepal.¹¹ The length of appendix reported in this case is much longer adding value to the novelty. Todorovic et al. reported that the direction and the length of the appendix leading to its unusual extension may lead to misdiagnosis as the appendicitis may mimic renal or biliary colic or sometimes even urinary tract infection.¹²

The appendix was filled with fecal matter in the case reported by Samaha et al., whereas in our case inflamed appendix formed a lump and was empty, but the perforation was present in the shaft. Dadeldhura belongs to a remote part of Nepal, and patients usually present late with lump formation. Being a single case report this study failed to establish the prevalence of perforations in mega appendix and effect of length of appendix in diagnosis of appendicitis.

Conclusion

The pattern of presentation of acute appendicitis variates and it is considered as a diagnostic challenge to the surgeon. The histopathological examination should be done to rule out other pathologies. Mega appendix may sometimes lead to misdiagnosis and variation in length

of appendix should be kept in mind during treatment of acute abdomen.

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