A Rare Case Report of True Diverticulum of Appendix

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ABSTRACT

Introduction: Diverticulitis of the appendix is a rare clinical finding which is often confused with acute or chronic appendicitis. It is rarely diagnosed pre-operatively and is usually identified during or after appendectomy. It has a higher risk for perforation in comparison with appendicitis and may be associated with an underlying malignancy.

Case report: A 40 yr old male presented to the casualty with complaints of pain abdomen since 1 day, associated with 3 episodes of vomiting with localised tenderness and guarding in the right lower quadrant of the abdomen. On ultrasonography, a non-compressible tubular blind structure with minimal free fluid was identified, indicating acute appendicitis and the patient was prepared for an open appendectomy. Intraoperatively, appendix was found to be inflamed with an outpouching noted at its antimesenteric border, 1cm distal to the base. The tip of this outpouching was perforated (Fig 1 and 2). An appendectomy was performed and specimen sent for histopathological examination. On HPE, the outpouching was diagnosed as a true diverticulum of the appendix. The diverticulum as well as the appendix was found to be inflamed.

Conclusion: This case report highlights the symptomatology, atypical patient demographics that should raise the suspicion of Diverticulum of appendix. Although the definitive treatment in both conditions is same, diverticulum of appendix is associated with unique risks and complications. The importance of a thorough radiological assessment would prove valuable in differentiating between the two entities.

Keywords: Appendix, Acute Appendicitis, Diverticulum

INTRODUCTION

Diverticulitis of the appendix is a rare anatomical variant found in 0.004% to 2.1% of appendectomies.1 It was first described by Kelynack2 in 1893 as a greatly distended appendix, totally shut off from the cecum, having two distinct diverticular processes directed between the folds of the mesentery.3 Its symptoms are similar to and often mistaken for those of early acute or chronic appendicitis.4,5 The definitive treatment for both conditions is appendectomy.5,7 No current diagnostic radiographic evaluations are available for appendiceal diverticulosis.6 Our aim is therefore to highlight the incidence of this rare entity that may mimic appendicitis but has its own implications and complications not commonly seen in a case of appendicitis and also the role of radiological investigations that may aid in its diagnosis.

CASE REPORT

A 30 year old male patient coming presented with pain in right lower quadrant of the abdomen since 1 day. The condition was accompanied by vomiting (3 episodes). Abdominal examination revealed tenderness in the right iliac fossa; he had a pulse of 97 beats/min, temperature of 38.1°C, and total leukocyte count of 9000 c/m. Ultrasonography revealed a non-compressible aperistaltic tubular blind structure with minimal collection, indicating acute appendicitis. The patient underwent open appendectomy. Intraoperatively, an outpouching was found arising from the anti-mesenteric border (Figure 1), 1cm distal to the base of appendix, the tip of which was found to be perforated (Figure 2). Appendectomy was performed and the specimen was sent for histopathological examination, revealing true diverticulitis of an inflamed appendix (type 2 diverticulitis of the appendix).

DISCUSSION

The incidence of diverticulae found in appendectomy specimens ranges from 0.004 to 2.1% and that from routine autopsies from 0.20 to 0.6%.6 Some believe that the incidence may be greater than that generally appreciated and may be dismissed by surgeons and pathologists as a variant of true appendicitis.8 Appendiceal diverticula are either congenital or acquired.9 Congenital diverticula are outpouchings of the entire appendiceal wall and account for 3% of all diagnosed cases of diverticulosis of the appendix (DA).1,4,9 The acquired type, which is the most prevalent, is a false diverticulum. It represents a herniation of the mucosa through a muscular defect of the appendix (mainly on the mesenteric border).10 The exact pathogenesis is still unknown, but several explanations have been postulated.1 The inflammatory theory is one of these explanations: it postulates that an attack of appendicitis occurs with a post-appendicitis weakness of the wall, followed by ulceration and regenerated epithelium over the injured area.11 Appendiceal diverticulitis has been classified into 4 subtype.12 Type 1 is defined as a normal-appearing appendix with an acutely inflamed diverticulum. Type 2 involves an acutely inflamed diverticulum with surrounding appendicitis, as seen in this case. Type 3 is conventional appendicitis with an

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CONCLUSION

We present a case in which a possibility of a true diverticulum was not considered in a patient presenting with early acute appendicitis. This case provides an example of the symptomatology, inconsistent radiographical findings, and atypical patient demographics that should raise the suspicion for true diverticulum. Although the definitive treatment for both true diverticulum and acute appendicitis is appendectomy, they each have unique risks and complications which make preoperative diagnosis a valuable step in the patient’s hospital course. Improving our ability to identify diverticulum before surgery will require higher indices of clinical suspicion based on patient presentation and better radiographic differentiation of the two clinical entities.

REFERENCES


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