Editorial

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Unexpected Appendiceal Pathologies and Preoperative Imaging Studies on Patients With Acute Appendicitis

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Acute appendicitis is the most common surgical emergency of the abdomen. Right lower quadrant abdominal pain is a common complaint, and many other infectious gastrointestinal pathologies may mimic acute appendicitis. The diagnosis of acute appendicitis is sometimes difficult, and misdiagnoses occur, even though the symptoms and signs of appendicitis are well known in the world. Accurate and quick diagnosis of acute appendicitis is essential to minimize morbidity and mortality and to lower the rate of negative appendectomies. Diagnostic accuracy without preoperative imaging is about 76%–80% [1, 2]. Also, negative appendectomies occur in a small portion of patients with appendicitis for fear of a delayed or missed diagnosis. Negative appendectomies performed on patients with suspected appendicitis result in increased morbidity and hospital expense. Thus, various kinds of preoperative studies are applied to confirm the preoperative diagnosis and to improve the preoperative accuracy of diagnosing acute appendicitis. Now, the uses of computed tomography (CT) and ultrasonography in the diagnosis of appendicitis are increasing, which has led to improved diagnostic accuracy [1]. Other preoperative studies are procalcitonin, C-reactive protein and white blood cell count, but these three tests are not 100% accurate [3]. Fecal calprotectin could be helpful in screening patients with right lower quadrant abdominal pain for the presence of acute appendicitis or infectious enteritis [4]. By definition, the use of ultrasonography in the diagnosis of appendicitis involves a compressed diameter of the appendix of more than 6–7 mm, with or without inflammatory changes in the fat surrounding the appendix. On the other hand, the diagnosis of appendicitis using CT is based on the appearance of a thickened appendix, 6–7 mm, with surrounding fat infiltration [5, 6]. The increased use of preoperative imaging has led to an improved treatment outcome in patients with suspected appendicitis and has decreased the rate of negative appendectomies from 19% to 5% due to better patient selection before surgery [7].

The authors stated that this study enrolled 4,673 patients who had undergone an appendectomy for appendicitis. The overall rate of pathology compatible with acute appendicitis was 84.4%. The rates of unexpected pathological findings, such as normal histology, specific inflammations other than acute appendicitis, neoplastic lesions, and other pathologies, were 9.6%, 3.3%, 1.2%, and 1.5%, respectively. Preoperative imaging studies decreased the negative appendectomy rate in patients under the age of 60. However, the use of preoperative imaging studies did not reduce unexpected appendiceal pathological findings other than the finding of a normal appendix. Unexpected appendiceal pathologies comprised 15.6% of all cases. Preoperative imaging studies reduced that number by decreasing the negative appendectomy rate for patients with normal appendices. Surgeon should be aware of these efficacies and limitations of imaging studies when using them to diagnose acute appendicitis [8]. A definite need exists for better preoperative screening of patients with suspected appendicitis; correct diagnosis is important in order to minimize morbidity and mortality in such patients.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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