



Letter to the Editor

The use of imaging methods instead of clinical findings in the diagnosis of acute appendicitis

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Dear Editor,

Acute appendicitis (AA) is the most common cause of abdominal pain among the patients admitting to the emergency services. Diagnosis of AA may be difficult; though there are many combinations of laboratory findings and imaging methods, several scoring systems, the diagnosis of AA depends mainly on history taking and physical examination. AA occurs at any age, mostly in 2 and 3 decades. While the lifetime risk of acute appendicitis is 6.7% in women, it is slightly higher in men and is 8.6% (1). Its annual incidence is around 100-150 per 100.000 people (2). Complicated appendicitis is classified as perforated appendicitis and plastron appendicitis.

Due to technological developments, it is aimed to make rapid diagnosis by increasing the use of imaging methods such as ultrasonography and computerized tomography (CT) in the emergency departments. So that, physicians waste time on patient history and physical examination. The different findings in the different imaging methods maybe confusing and the diagnosis maybe more challenging.

Many patients might be sent home with antibiotic treatments and return later with complications due to delay in diagnosis. Despite the increasing number of tests and imaging methods used, the rate of delayed diagnosis of AA was reported 26.2% in a recently published study. It was emphasized that this rate was higher than previous studies (3).

Moreover many clinical scoring systems have been developed to determine the probability of AA and rule out other diseases with abdominal pain. Alvarado score, Appendicitis Inflammatory Response (AIR) score and Adult Appendicitis score is among most popular systems (4). These scores mainly include patients complaints as nausea, vomiting, anorexia, increase in white blood cell count, palpation of right lower quadrant pain, rebound tenderness, increase in body temperature and leukocytosis shift. A diagnostic method combining clinical scoring systems with imaging technics has not been described. Improper combination of imaging methods and clinical tests may cause misdiagnosis of early appendicitis. For

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decades diagnosis of AA has been made by history taking and physical examinations. Later laboratory tests have been added and imaging technics have emerged. CT has become the technique of choice between imaging methods. New devices are faster and can view more patients. Therefore, physicians have become more dependent on more imaging methods. As a result of imaging-dependent patient management, early stage of acute appendicitis can be misdiagnosed. More plastron or perforated appendicitis are seen in the operation room though this should be the reverse. Also it should be remembered that repeated use of CT exposes significant amount of radiation to the patient.

In conclusion, physicians can research for new methods in the diagnosis of acute appendicitis and use different scoring systems according to the findings, but basic methods such as physical examination and patient history should not be leave.

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