



Invited Commentary

A commentary on “bedside ultrasonography for acute appendicitis: An updated diagnostic meta-analysis” (Int J Surg 2019 Aug 9;70:1-9. doi: 10.1016/j.ijisu.2019.08.009. [Epub ahead of print])



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Acute appendicitis is one of the common abdominal surgical emergencies [1]. Early diagnosis provides good results with patient satisfaction. With the use of modern diagnostic imaging techniques, the negative appendectomy rate has reduced significantly. However, computed tomography with ionizing radiation and high cost would not be suitable for some groups of pediatric and pregnant patients [2]. Shen et al. [3] has shown a reliable option in their meta-analysis on the use of bedside ultrasonography in diagnosing acute appendicitis. They analysed 27 studies and found a high overall diagnostic rate in patients with suspected acute appendicitis. This paper gives important messages on this issue which should not be disregarded. However a few points should be mentioned:

First, ultrasonography is a user-dependent technique [2]. A misdiagnosis can happen because of the user, the physical condition and the body mass index of the patient. Experience in ultrasonography is a critical point in accurate diagnosis, especially in pregnant, obese or patients with abdominal distension. Anatomical variations in location and structure of the appendix is another factor which adds difficulty to the ultrasonographic procedure in arriving at a correct diagnosis.

Second, the following ultrasonographical criteria should be adequately evaluated in each patient, including the appendix vermiformis wall thickness, periappendicular fluid collection, sonographic McBurney sign, inflammation around the appendicular/caecal region, free fluid between intestinal loops and hyperemia using a color-flow Doppler [4].

Third, is on the heterogeneity of the studies and the sample sizes of each study included in the meta-analysis [3]. The heterogeneity of the patient groups may effect the diagnostic and treatment outcomes, or it may introduce bias into the study. The small sample sizes of the studies restrict the power of the study [5].

In our view, the conclusions which can be drawn from this meta-analysis is that in patients with suspected acute appendicitis, bedside ultrasonography is a diagnostic tool which has a high diagnostic

accuracy. However, large homogeneous groups of patient should be prospectively studied in the future.

Conflicts of interest

Ali Kagan Coskun: None.
Zuhal Y Coskun: None.

Provenance and peer review

Invited Commentary, internally reviewed.

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