Evaluation of negative appendicectomy rate in cases of suspected acute appendicitis and to study the usefulness of ultrasonography in improving the diagnostic accuracy

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We read with interest the article by Sharma et al. [1] in the recent issue of IJS and we agree with the authors that there is a wide variation in the negative appendicectomy in majority of series. The quest to find the investigation which would virtually eliminate negative exploration remains an elusive proposition.

In the present series, the classical shift of pain from umbilical region to right lower quadrant was observed in only 8.4%, while past history of similar pain was present in 38.1%. This is an interesting finding because the first attack of acute appendicitis is usually accompanied by the classical shift of pain, and appendicitis is not known to pursue a chronic course. However, following an initial successful treatment of antibiotics, the disease might pursue a recurrent course [2]. In such situations the subsequent attacks of pain may not have the classical shift and start from the right iliac fossa. Given that antibiotics are so routinely used in our country, and also the difficulty in establishing whether patients have taken antibiotics during their previous attacks of pain, it can be tricky to ascertain whether 'recurrent' appendicitis is the cause of chronic right iliac fossa pain. This is a very common clinical scenario in our setup, and in these situations, ultrasonography is of use to *exclude* other pathology.

The authors also note that in 90 patients with histologically proven acute appendicitis, ultrasonographic

criteria of appendicitis was absent in 33 patients (36.7%). Such findings underscore the importance of history and clinical examination, and these issues shape up the surgical decision to operate. Interestingly, in one study, the sensitivity of ultrasonography in patients with a perforated appendix was 28.5%, which was much lower than in those with acute non-perforating appendicitis (80.5%) [3]. Presumably, this was due to intestinal ileus, which often accompanies appendicular perforation, and the distended bowel precludes proper ultrasonographic visualisation.

The study also found that, in the total of 28 histologically normal appendix, ultrasonography correctly predicted so in 23 patients (specificity 82.14%). This questions the validity of the clinical decision to operate, which is usually based on the presence of pain and tenderness. A more holistic approach taking into account the duration and/or chronicity of pain, prior history of antibiotics, presence of nausea might reduce the negative laparotomy rate [4]. Patients with equivocal findings may simply be labeled as suffering from non-specific abdominal pain (NSAP) and maintained on clinical follow-up [4].

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Author response

It is an interesting observation by Jahangir et al. We appreciate their comments and the fact that they spent time to read it carefully. Indeed, acute appendicitis still remains a clinical diagnosis and a careful history and physical examination are paramount in clinical decision making to operate. However, on summarizing their observations, one reaches the same conclusion as mentioned in our original

article (1) that the diagnosis of acute appendicitis is still essentially clinical and undue reliance should not be placed on ultrasound of abdomen to diagnose and treat this condition. Ultrasound of the abdomen, however, is recommended in all cases of suspected acute appendicitis, to exclude alternative diagnoses making it a useful adjunctive tool in decision making in difficult cases. With high frequency transducer, even the normal appendix can be visualized in expert hands. Further, ultrasound facilities are inexpensive and readily available even in remote areas in our country making its utility realistic.

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