What is the optimal treatment for appendiceal mass formed after acute perforated appendicitis?

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Abstract

We read with great interest the editorial article by Meshikhes AWN published in issue 25 of World J Gastroenterol 2011. The article described the advantages of emergency laparoscopic appendectomy compared with interval appendectomy as a new safe treatment modality for the appendiceal mass. The author concluded that the emergency laparoscopic appendectomy was a safe treatment modality for the appendiceal mass, and might prove to be more cost-effective than conservative treatment, with no need for interval appendectomy. However, we would like to highlight certain issues regarding the possibility of percutaneous catheter drainage to successfully treat the appendiceal mass, with no need for appendectomy, too.

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Key words: Appendiceal mass; Percutaneous drainage; Antibiotic therapy; Interval appendectomy; Laparoscopic appendectomy

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Zerem E, Imamović G, Ljuca F, Alidžanović J. What is the optimal treatment for appendiceal mass formed after acute perforated appendicitis? World J Gastroenterol 2012; 18(15): 1849-1850 Available from: URL: http://www.wjgnet.com/1007-9327/full/v18/i15/1849.htm DOI: http://dx.doi.org/10.3748/wjg.v18.i15.1849

TO THE EDITOR

We commend Meshikhes AWN(1) for an interesting editorial article about the advantage of emergency laparoscopic appendectomy (LA) compared with interval appendectomy (IA) as a new and safe treatment modality for the appendiceal mass. The author concluded that the emergency LA was a safe treatment modality for the appendiceal mass, and might prove to be more cost-effective than conservative treatment, with no need for IA. LA is associated with a much shorter hospital stay and it obviates the need for long-term intravenous antibiotic treatment. If emergency LA becomes the standard of care, IA will certainly become ‘something’ of the past.

However, on the basis of our long-term experience(2), we would like to highlight certain issues regarding the possibility of percutaneous catheter drainage (PCD) as the treatment modality which can successfully solve the appendiceal mass formed after acute perforated appendicitis, thereby obviating the need for an emergency appendectomy. LA is less aggressive than open surgery,
but it is a much more aggressive procedure as compared with PCD performed under ultrasound or computerized tomography. The latter can be performed without general anesthesia and with less tissue dramatization. We strongly believe that PCD followed by vigorous irrigation can achieve good results in the majority of patients with appendiceal mass.

A few years ago, we conducted a randomized controlled trial in order to evaluate whether PCD could successfully and completely treat the appendiceal mass, thereby avoiding the need for appendectomy. The conclusion of our study was that PCD with antibiotics administration was a safe and effective treatment protocol for acute perforated appendicitis. The appendicitis recurrence rate was rather low and very often interval appendectomy was not required. For patients with appendiceal mass ≥ 3 cm in diameter, antibiotic treatment alone was insufficient and the recurrence rate was high.

Our hypothesis was based on the estimation that obstruction of proximal appendiceal lumen by fecaliths, foreign bodies, tumors, parasites, and lymphoid hyperplasia accounted for approximately 70% of the causes of appendicitis. Obstruction of appendiceal lumen is followed by mucus secretion, bacterial overgrowth, increasing intraluminal pressure and wall tension, vascular congestion, gangrene, perforation, and disintegration of appendix distal to the site of obstruction. Our idea was derived from the fact that appendiceal lumen obliteration with subsequent fibrosis of the rest of perforated appendix after drainage of necrotic content and pus so that appendicitis could be resolved without appendectomy.

We agree that the advantage of emergency laparoscopic appendectomy lies in the detection of hidden pathologies. However, hidden pathology can be encountered occasionally and failure to detect it can be avoided by performing appropriate follow-up investigations to exclude its presence.

In summary, we believe that PCD is technically feasible in the majority of patients with appendiceal mass. Therefore, PCD with continuous drainage and followed by vigorous irrigation and proper administration of antibiotics should be considered the therapy of choice for some patients with appendiceal mass formed after acute perforated appendicitis.

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