

Unexpected appendiceal histopathology during upfront diagnostic laparoscopy for right iliac fossa pain: is a normal-looking appendix always innocent?

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Right iliac fossa pain is a common reason for emergency gastroenterology and surgery referrals and consultations within all levels of medical care, with acute appendicitis being the most frequent differential diagnosis. Under this notion, and taking into account that traditionally appendicitis is considered a clinical diagnosis, despite the increasing adoption of computed tomography as the default emergency assessment essay, many patients will undergo an upfront diagnostic laparoscopy. Intraoperatively though, our anecdotal experience with similar cases suggests that a notable number of patients had a macroscopically normal appendix, without any evidence of concurrent abdominopelvic pathology that could explain their symptoms; on those occasions, and to prevent future diagnostic confusion, and considering the possibility of non-transmural inflammatory changes, our institutional practice was to proceed with appendectomy in all of these cases. Although this approach is based on the logical above-mentioned rationale, one could justify as unnecessary the removal of a normal-looking appendix, particularly in cases where post-operative complications would occur, such as bleeding from the mesoappendix remnant or blowout of the appendiceal stump [1, 2]. Therefore, we reviewed the histopathology of all our patients who had undergone upfront diagnostic laparoscopy and appendectomy for right iliac fossa pain, without prior abdominal imaging via ultrasound or computed tomography, examining all relevant cases in which the presence of a macroscopically normal appendix was documented in the operation notes, over a 5-year period (03/2016-03/2021).

Our records indicated that in a total of 385 laparoscopic appendectomies, the presence of a mac-

roscopically normal appendix was documented in 64 (16.6%) cases by the operating surgeons. With regards to the histopathology of these removed normal-looking appendices, 43/64 (67.2%) of the findings were consistent with significant lymphoid follicles' hyperplasia without active wall inflammation, 5/64 (7.8%) revealed the presence of oxyuriasis, 2/64 (3.1%) showed mild chronic appendicitis with mucinous hyperplasia, and finally in 1 (1.6%) case the histopathology was consistent with complete obliteration of the appendiceal lumen and accompanying chronic atrophic changes. Hence, complete absence of any pathology in the removed appendices, with absolute accordance with the macroscopically normal appearance, was the case in 13/64 (20.3%) patients. Of note, according to the outpatient clinical follow-up letters and correspondence with the patients' primary care physicians, no appendectomy-related complication had occurred. Taking these findings into account, we concluded that our practice of removing a normal-looking appendix during upfront laparoscopy for right iliac fossa pain in the absence of any other obvious pathology that could explain the patients' symptoms is justified and reasonable. Finally, despite the ongoing debate regarding the need for selective or default histopathological assessment of resected normal-looking appendices [3], we strongly advocate for a standard and by default histopathological review, given that, in our experience, in less than one in 5 cases normal macroscopic appearance was consistent with normal histology.

Conflict of interest

The authors declare no conflict of interest.

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