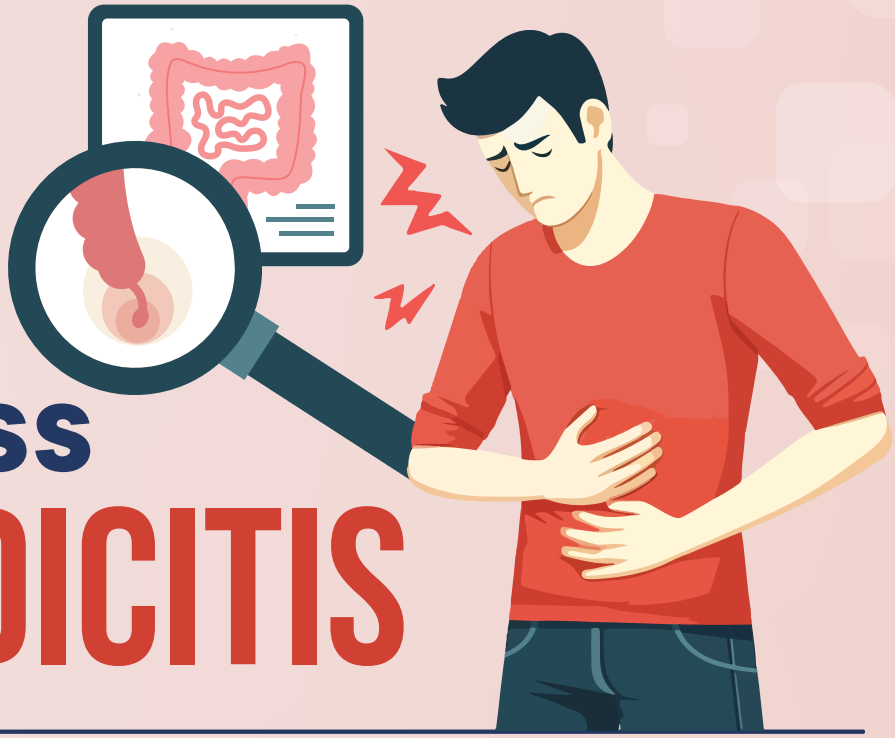

Near Miss APPENDICITIS

Text by Dr Desmond Wai

Several years ago, I received a letter from a lawyer. It is never fun to see a letter from a lawyer's office addressed to you. Fortunately, it was not about something I did or did not do. Rather, a lawyer wanted me to be an expert witness for his client (the plaintiff).

I was given a summary of the case. The plaintiff was a middle-aged woman who presented to the emergency department (ED) for whole abdominal pain. It was not severe and the initial clinical examination did not show any tenderness. The doctor involved conducted gastroscopy and colonoscopy during the admission and found no serious cause. The patient's abdominal pain did not resolve, but she was discharged. About a week later, her pain worsened and she was diagnosed with a ruptured appendix. She underwent a right hemicolectomy and subsequently recovered, but she was very upset and sued her doctor.

I replied to the lawyer that I personally knew the doctor involved in the case and hence could be a biased witness, gently turning down the invite. I have not seen updates about this case in the news nor on the Singapore Medical Council website, so I suppose the case did not progress any further.

My own near miss

I am usually very careful about patients with abdominal pain, and I am aware that acute appendicitis is a great mimic. While advanced appendicitis is hard to miss, early appendicitis can be difficult to recognise.

Several years after the lawyer's invite, I had a near miss.

Mr A, a 60-year-old man, was admitted via the ED for abdominal pain. I interviewed Mr A and he told me he had regular abdominal pain, sometimes over the left lower region and sometimes over the epigastric region. He had been having this pain intermittently over a few years. His full blood count, amylase levels, liver function test results, C-reactive protein levels and urinalysis results were all normal. His parameters were also normal and he was afebrile.

I palpated his abdomen and found no definite tenderness or guarding. Thinking it could be a case of diverticulitis or renal colic, a CT scan was offered. But Mr A declined, saying that a CT scan had been done at another hospital some time ago, and he was told that the results were normal.

I therefore offered to conduct digestive endoscopy, as his pain occurred regularly and he had never been scoped. I prepared him for the scope with oral Phospho-soda, and scoped him the next day, during which reflux oesophagitis and colon polyps were found. I palpitated his abdomen before and after scopes, and again found no tenderness or guarding in the abdomen. I logged onto the National Electronic Health Record system to view his last CT scan result, and found that his last CT scan had been done at a public hospital in 2021, also for abdominal pain. The results were normal, but a 0.9 cm right adrenal nodule was seen. I double-checked with Mr A and at that point, no follow-up scan had been done.

I recalled a case where several doctors and a hospital were sued for missing a lesion on a chest X-ray when that lesion later turned out to be malignant. Though none of the doctors were found to be negligent, undergoing a legal process that could last for as long as ten years is undesirable. And even though most adrenal nodules turn out to be benign,

I might have to spend a great deal of time defending myself if I were unlucky and the adrenal nodule turned out to be malignant. Thus, I discussed with Mr A about doing a follow-up CT scan to compare the size of the adrenal nodule, to be thorough and for peace of mind.

The CT scan was done soon after the scope, and just as I was about to leave work for the day, Dr Ng, a radiologist colleague, called to inform that the patient had a swollen appendix with fat stranding outside the appendix. The radiological diagnosis was acute appendicitis. The adrenal nodule was stable in size, so no action was needed.

I returned to the ward right away and examined Mr A again. Still, his right lower quadrant was non-tender and non-guarded. But I never fight or argue with any radiologist, so I called a surgical colleague, Dr Teo, to help me co-manage Mr A. Two hours later, Dr Teo texted saying that she had found tenderness and guarding in Mr A's abdomen and would be proceeding to conduct laparoscopic appendectomy.

By 9.30 pm that night, Dr Teo updated that it was indeed acute appendicitis when viewed laparoscopically. Surgery was performed uneventfully. Mr A was discharged on the second post-operation day, and the histology results returned later confirming that it had been a case of acute appendicitis.

I was lucky that I did not miss the diagnosis. Appendicitis and acute cholecystitis are always on my mind whenever I see patients with abdominal pain. Missing these diagnoses can lead to serious consequences. Despite having specifically looked out for acute appendicitis in Mr A during the physical examination, there were no signs of it. He was one of those patients who have delayed presentation of right lower quadrant tenderness and guarding.

To judge gently

Appendicitis can present differently in different people, and it is one of the most commonly missed diagnoses at the ED. Dr Mahajan, emergency physician from the University of Michigan, and his colleagues reviewed 187,461 patients with a diagnosis of appendicitis over an eight-year period and found appendicitis potentially being missed in 6% of adults and 4.4% of children.[1] Risk factors for missed appendicitis include female gender, and atypical symptoms such as constipation or diarrhoea.

Missed appendicitis is also one of the commonest reasons for medical malpractice lawsuits. In Mr A's case, if he had been discharged after scopes, I would have had a missed diagnosis, and Mr A would certainly come back for complications from a ruptured appendix. Given that I had diligently documented my frequent physical examinations on Mr A, I likely would be fine even if Mr A complained or sued. Nevertheless, no doctor would like to go through any lengthy legal or disciplinary proceedings.

Mr A's case seemed similar to my colleague's case of missed appendicitis. I am not sure of the exact clinical setting of the case, as I did not go through the records in detail. But it is likely that as with Mr A's case, the classic symptoms of right lower quadrant pain, tenderness and guarding appeared much later than the initial upper or mid-abdominal pain. By the time the typical symptom of right lower quadrant pain occurred, the patient might have been discharged.

I know many who believe in karma. Maybe the reason I did not miss Mr A's appendicitis is because I declined to be an expert witness on the plaintiff's side many years ago. But I believe more in the *Bible*, which says, "For in the same way you judge others, you will be judged, and with the measure you use, it will be measured to you." Perhaps we should not be too harsh on our colleagues. Different patients do present differently for the same diagnosis. If we are called upon to judge our colleagues, we should remind ourselves to give consideration to our colleagues and judge our colleagues at an appropriate level of competence.

Judge our colleagues gently, and we shall be judged gently by other colleagues. ◆

Reference

1. Mahajan P, Basu T, Pai CW, et al. Factors Associated With Potentially Missed Diagnosis of Appendicitis in the Emergency Department. JAMA Netw Open 2020; 3(3):e200612.

Dr Wai is a gastroenterologist in private practice. He enjoys writing about life as a doctor. He strongly believes that doctors must share their experience and knowledge with one another to raise the standard of the medical profession.

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