

## Response to reviewers' comments

We would like to thank you for taking the time to review our manuscript in detail. We have made several corrections and clarifications in response to your comments.

### Reviewer #1

The Authors reported an interesting case of a boy with omental infarction. They found that there were no specific findings on ultrasonography, but an abdominal CT was used to make a diagnosis of omental infarction. The value of this study is to tell doctors that if a case has right abdominal pain and no specific findings on ultrasonography, a CT examination should be carefully considered if symptoms do not improve by follow-up or other diseases are suspected. Figures are nice.

The authors mentioned there was a risk of radiation exposure, whether the radiation dose of this CT examination should be described.

Thank you for your comments. We added the following sentences.

200 - 206

However, because children are vulnerable to radiation, the same dose of radiation is more harmful to them than to adults. The abdominal CT scan was examined with a tube voltage of 100 kVp, and the dose length product was 166 mGycm, which was much lesser than the abdominal CT dose for adults. Nevertheless, additional efforts should be devoted to reducing the radiation dose as much as possible in the abdominal CT examination for children.

Reviewer #2:

This article introduces a 6-year-old child with omental infarction not appendicitis who was diagnosed by enhanced CT and then underwent laparoscopic surgery with good results. For children, we should not forget the rare omental infarction while keeping an eye on appendicitis, which deserves clinical attention.

In addition to providing imaging examination, it is also necessary to provide blood sampling indicators. Blood routine and biochemical indicators should be mentioned in the manuscript.

Thank you for your comments. We added the following sentences and the corresponding reference.

178-184

A previous study compared OI and acute appendicitis in children<sup>[16]</sup> and suggested that OI should be considered in patients with lower right abdominal pain with a neutrophil fraction <77%<sup>[16]</sup>. The results showed that WBCs ( $11,928 \pm 1,042$  and  $16,207 \pm 857$ ; p-value 0.024), neutrophils ( $8,080 \pm 832$  and  $14,057 \pm 781$ ; p-value 0.001), and CRP ( $3.349 \pm 1.155$  and  $9.082 \pm 1.659$  mg/dL; p-value 0.008) were significantly different between OI and acute appendicitis<sup>[16]</sup>. These findings were consistent with our case.



Reviewer #3:

1.in discussion part, the first paragraph is unnecessary

Thank you for your comments. I agree with your opinion. Thus, we deleted the first paragraph in the discussion section.

~~We report the case of a 6-year-old boy who visited the emergency room with right abdominal pain. He underwent an ultrasonography, and returned home without any findings. Two days later he underwent surgery after being diagnosed with OI by an abdominal CT.~~

2.in discussion part, imaging findings of OI and appendicitis should add.

Thank you for your comments. We added the following sentences.

130-135

The appendix was collapsed, and no evidence of acute appendicitis was found. Abdominal CT scan showed approximately 4 cm of fat lobule below the umbilical ligament of the liver left lobe. A hyperdense halo and surrounding fat stranding were detected in the periphery of the fat lobule. The vessel of the upper portion inside the fat lobule showed a whirling sign. These abdominal CT findings were consistent with OI.

186-192

On ultrasonography, OI shows increased echogenicity of noncompressible omental fat in a painful area<sup>[17,18]</sup>. In children, OI is difficult to diagnose via ultrasound when communication or symptoms are unclear. In this case, the patient was considered to have a negative

ultrasound finding because the symptom was unclear and the presentation of abdominal pain was not localized. Clinically, OI is difficult to distinguish from acute appendicitis and often misdiagnosed as acute appendicitis, leading to surgery <sup>[19]</sup>.

194-200

Therefore, CT may be considered if acute appendicitis is not clearly ruled out or if abdominal pain persists even after acute appendicitis is excluded. The CT findings of acute appendicitis, which is the most common cause requiring surgery for RLQ pain, include a distended appendix with a diameter of more than 6 mm, wall thickening of more than 3 mm, and secondary inflammatory periappendiceal changes. The sensitivity and specificity of CT for the diagnosis of acute appendicitis are within the range of 94%–98% <sup>[21]</sup>.

Reviewer #4:

Title: Omental infarction differentiated from appendicitis diagnosed by CT and missed with ultrasonography: A case report  
Name of Journal: World Journal of Clinical Cases  
Manuscript

Type: Case Report  
Comments: Omental infarction (OI) is a surgical abdominal disease and very rare in children. The author of this manuscript reported a case of a 6-year-old boy with OI diagnosed by CT and missed by ultrasonography. The subject of this manuscript is of value, but there are defects need to be modified.

1. The signs of each figure in Figure 1 should be described and marked (arrows or others).

Thank you for your comments. We added the following sentences in Figure legends.

**Figure 1 Radiologic study.** A, B: Simple abdomen. C, D: Computed tomography.

On erect (A) and supine (B) plain radiography, feces and gas are found inside the large bowel, and no other specific findings are shown.

Axial (C) and coronal (D) scan of abdominal CT show a fat lobule below the umbilical ligament of the liver left lobe. A hyperdense halo and surrounding fat stranding are in the periphery of the fat lobule. (arrow) The vessel of the upper portion inside the fat lobule shows a whirling sign.

2. It is suggested that the author describe the possible ultrasonic signs of OI, and briefly explain and discuss the possible causes of negative ultrasound examination in this case.

Thank you for your comments. We added the following sentences.

186-192

On ultrasonography, OI shows increased echogenicity of noncompressible omental fat in a painful area<sup>[17,18]</sup>. In children, OI is difficult to diagnose via ultrasound when communication or symptoms are unclear. In this case, the patient was considered to have a negative ultrasound finding because the symptom was unclear and the presentation of abdominal pain was not localized. Clinically, OI is difficult to distinguish from acute appendicitis and often misdiagnosed as acute appendicitis, leading to surgery<sup>[19]</sup>.