Peer Review File

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Reviewer A

Thanks to the editorial team for the opportunity to conduct this review and to the authors for sharing this interesting case.

It is a case of a giant thymolipoma observed in a pediatric patient, which is quite rare. For this reason, it is of interest its publication. It is also explained in an exhaustive and correct way, with good illustrations and providing information on the long-term evolution.

Below are my comments in order of appearance in the manuscript:

Comment 1: Highlight box (What is the implication and what should change now?)
The first sentence in the implication section does not reflect a change in management as it refers to a practice that is already routine in clinical settings.

Reply 1: We appreciate the reviewer's observation. The text has been revised to emphasize the need for standardized guidelines specifically for pediatric patients with large thymolipomas, rather than reiterating routine clinical practices. Changes in the text: The first sentence in the implication section has been modified accordingly (see Page 3).

Comment 2: Case presentation - Contribution of ultrasound
The contribution of ultrasound in this case is not sufficiently explained, especially given the information already provided by CT and MRI.

Reply 2: We agree with the reviewer and have added a clarification. While CT and MRI provide detailed structural information, CEUS offers real-time imaging, which was particularly useful in confirming the absence of significant vascular involvement preoperatively, aiding in surgical planning. Changes in the text: We added an explanation about the specific contribution of ultrasound (see Page 5, Line 101-109).

Comment 3: Case presentation - Necessity of lesion puncture
Was a biopsy of the lesion necessary given the diagnostic information available from CT and MRI?

Reply 3: The decision to perform a biopsy was made to ensure diagnostic certainty and to

exclude other potential diagnoses such as liposarcoma or other germ cell tumors. We have provided a justification in the revised manuscript. Changes in the text: We added a justification for performing the biopsy (see Page 5, Line 109-113).

Comment 4: Case presentation - Imaging test for follow-up
What imaging test was used for follow-up?

Reply 4: Follow-up imaging was conducted using MRI due to its superior soft tissue contrast and lack of radiation exposure, which is particularly important for pediatric patients. This has been clarified in the text. Changes in the text: We specified MRI as the imaging modality used for follow-up (see Page 6, Line 126-128).

Comment 5: Case presentation - Preoperative study with hospital admission
The need for preoperative hospital admission is unclear.

Reply 5: Preoperative hospital admission was necessary for detailed multidisciplinary evaluation and optimization of surgical planning. Changes in the text: The rationale for preoperative hospital admission has been included (see Page 6, Line 130-132).

Comment 6: In this section there should be an explanation of the contribution of ultrasound in diagnosis and surgical planning compared to CT and MRI.

Reply 6: The discussion has been expanded to include a comparison of the contributions of CEUS, CT, and MRI, highlighting the specific advantages of each modality in the diagnostic and surgical planning process. Changes in the text: The role of ultrasound compared to CT and MRI has been elaborated (see Page 7, Line 140-144).

Comment 7: Conclusions - Clarity on surgical treatment
The last sentence of the conclusions contradicts the idea expressed in the last paragraph. After reading the Discussion and Conclusions it is not clear whether surgical treatment is always advocated or whether observation with imaging tests can be explored in some cases.

Reply 7: The conclusion has been revised to better align with the discussion. We now emphasize that while surgical resection is recommended for symptomatic or large tumors, observation and time-limited surgery may be considered in cases where the tumor is asymptomatic and not rapidly growing. Changes in the text: The conclusion has been modified to clarify the stance on surgical treatment based on future clinical diagnosis and treatment consensus (see Page 9, Line 180-182 and Page 9, Line 185-191).

Reviewer B

Comment 1: "A teenage girl" instead of "A teenager girl"
Please use "A teenage girl" for grammatical accuracy.

Reply 1: We have corrected the text to "a teenage girl." Changes in the text: Correction made on Page 2, Line 32 and Page 4, Line 87.

General Comment 2: Introduction
The sentence needs rephrasing to better communicate the potential for large tumors to cause symptoms despite their typically asymptomatic nature.

Reply 2: The introduction has been rephrased to emphasize that thymolipomas are typically asymptomatic but can cause symptoms due to their potential for significant growth and mass effect. Changes in the text: We rephrased the introduction (see Page 4, Line 69-71).

General Comment 3: MRI vs. CT in Surgical Planning
In line 73-75 it is stated that MRI provided additional detail in the mass's relationship to vascular structures, but CT can do this as well. What was the benefit of the MRI?

In the discussion starting at line 106 - it states that MRI was crucial for detailed anatomic assessment. What benefit did the MRI provide over CT for surgical planning? MRI can help confirm fatty tissue composition which aids more confidence in the diagnosis of thymolipoma, however, I am curious about what the actual benefit was to surgical planning.

Reply 3: The benefit of MRI in this case was primarily in confirming the composition of the tumor as predominantly fatty, which is crucial for accurate diagnosis and surgical planning. MRI's ability to differentiate between fat and soft tissue provided essential details that aided the surgical approach. Changes in the text: We clarified the benefits of MRI in the discussion (see Page 7, Line 151-156).

General Comment 4: Justification of CEUS
CEUS seemed to be an interesting choice for imaging assessment of this mass. Why was this modality recommended? What benefit did it have in assessing the tumor? I think it is important to justify its use (if indeed it is justified and necessary). If CEUS is to be a recommended imaging strategy that is crucial for characterization and diagnosis, it should be justified from a radiological perspective. In my opinion, I think this adds very little to the diagnosis if anything at all. If the literature supports that it is or is not necessary, I think it should be stated in the manuscript. It is okay to state that this adjunctive imaging modality

(CEUS) was used, but ultimately not absolutely required to aid in diagnosis.

Reply 4: CEUS was used as an adjunctive tool to confirm vascular characteristics without additional radiation exposure. While not essential for diagnosis, it provided useful additional confirmation, particularly in surgical planning. This has been clarified in the manuscript. Changes in the text: We justified the use of CEUS and its role in this case (see Page 5, Line 103-109 and Page 7, Line 140-144).

General Comment 5: Figure captions for MRI and CT
Figure captions need to be more detailed, with specific mention of imaging sequences and features.

For the CT, it should state which images are "lung window" (top row) and which are "soft tissue window" (bottom row).
The important imaging feature of thymolipomas is the presence of fat. This is already shown in the CT as macroscopic fat is clearly present based on the density. This should be mentioned in the caption.

For the MRI, the sequences need to be labelled. I am presuming the first image is a T1 weighted fat suppressed, post gadolinium. I presume the second image is a T1 or T2 weighted image without fat suppression.

For the MRI figures, it would be important to show a non-fat saturated T1 and fat-saturated T1 image (or non-fat sat T2 and fat sat T2) side by side. This would show clear fat suppression in the tumor (again indicating macroscopic fat). This should be mentioned in the figure caption/description as well.

For the CEUS figure caption and the description of the findings of enhancement pattern within the manuscript, what does it mean? "uniform, slow, low enhancement, and then fading away slowly" is the description of the enhancement pattern, but to someone reading the article, what is the importance of this? How does that information help me understand the tumor?

Reply 5: The figure captions have been revised for clarity and detail. CT images are labeled as "lung window" and "soft tissue window," and MRI images are labeled according to the sequences used, with emphasis on the importance of fat suppression in identifying thymolipoma. Changes in the text: Figure captions have been updated accordingly (see Page 13, Figure captions).

Reviewer C

General Comment: Manuscript Quality and Innovation

The manuscript is well-written and provides a novel perspective on the use of multimodal imaging in the diagnosis and treatment of pediatric thymolipoma.

Reply: We appreciate the positive feedback. We have carefully revised the manuscript to enhance clarity and to address the specific points raised by the other reviewers, ensuring that the innovative aspects of our study are well-highlighted.