Response to reviewers

We would like to thank you for the excellent commentaries about our paper. Please, the following answers about raised questions are shown below:

Reviewer (02844701):

Q. *What are limitations and clinical use of case report*

Comments: We ameliorate the english phraseology and explained the limitations and showed the clinical use on last paragraph of discussion.

"This paper focused a single clinical case which could not be extrapolated to all cases of RMS on head and neck. However, due to scarcity of analogous clinical cases and needing to better comprehend this condition, this report could be useful for clinical practice, including differential diagnosis options and diagnosis by clinical or microscopic similarities."

Reviewer (00723886)

Q. *The authors describe a case of an embryonal rhabdomyosarcoma of the maxillary sinus in a 10 year old boy. First, according to the WHO classification of skeletal muscle tumors, malignant neoplasms are devided in 4 categories (embrional, alveolar, pleomorphic and spindel celss/sclerosin rhabdomyosarcoma) - this should be corrected in the manuscript. Why is this case so interesting – it is known that these tumors most commonly occur in the head and neck region (almost half of the cases) and in the young age. The surgical and histological findings should be better described. Also Figures 1, 2, 3. and 4. should be explained much better. Figure 1 – no description at all. Figure 2 – whatdo we see on the CT scan? Figure 3 - there is no histological description of the tumor (authors are just stating that we are looking at undifferentiated malignancy). Figure 4 - Please describe what positiv for each antybody means (e.g. for MyoD should be positive in the nuclei, while cytoplasmic staining is usually found in paraffin-embeddeed material). Furthermore, discussion should be improved – radiological, histological and immunohistochemical findings should be used to discuss the differential diagnosis. Concearning prognosis, IRSG divided rhabdomyosarcomas in low-, intermediate- and high-risk group. This should also be discussed (starting with the case presented). Finally, the manuscript needs english editing (some sentances are not easy to follow).*

Comments:

- The classification of rhabdomyosarcoma was corrected in the introduction.

- Due to scarcity of analogous clinical cases and needing to better comprehend this condition, this report could be useful for clinical practice, including differential diagnosis options and diagnosis by clinical or microscopic similarities.

- Surgical and histopathological findings were best described in the caption of the figures, as follows:

Figure 1. Initial clinical features of the lesion showing a reddish painful firm mass on left side of face with rapid evolution (25 days). This lesion was causing left visual impairment with notorious swelling on facial skin with absence of other obstructive symptoms.

Figure 2. CT scan of the paranasal sinuses. On coronal view, a diffuse hypodense mass was dislocating lateral wall of left sinus and compressing the inferior border of left orbital structure with tumoral invasion. On axial plan, tumoral mass was filling the left sinus and a dislocated nasal septum was evident.

Figure 3. The microscopic slide showed an undifferentiated malignancy with hypercromatic rounded cells with scarce and eosinophilic cytoplasma infiltrating the skeletal muscle tissue (hematoxylin-eosin, 40X).

Figure 4. Immunohistochemical analysis showed positiveness to anti-Desmin antibody with dual cytoplasmatic and nuclear staining (A). The same pattern was observed against anti-Ki67 (B) showing intense positiveness and high rate of cell proliferation. Anti-myogenin and MYO-D1 were positively found on nuclear staining leading to RMS lineage supposition (C and D).

- The following information has been added to the article:

- The clinical differential diagnosis may be performed with others agressive connective tissue malignant lesions as Fibrosarcoma, Ewing's sarcoma and Leiomyosarcoma. The final diagnosis is realized throuh microscopic tests.

- The prognosis of rhabdomyosarcoma is evaluated according to its clinical, anatomical, histopathological and age characteristics. Normally, the sRMS and aRMS have a good and poor prognosis, respectively. The eRMS of the present case is classified as having an intermediate prognosis lesion.

Reviewer (00722438):

Q. *Well written case report that needs improvements. - Description of the surgical findings in terms of tumor extension/infiltration of the orbital structures. - It should be more evident the contribution of this case report for the present literature. What does this case report add to the existing knowledge in management of this pathology should be highlighted in conclusion. - English language polishing.*

Comments:

- The following information has been added to the article:

This lesion was causing left visual impairment with noticeable swelling on the facial skin with no other obstructive symptoms. In the computerized tomography of the paranasal sinuses, in a coronal view, a diffuse hypodense mass dislocated the lateral wall of the left sinus and compressed the inferior border of the left orbital structure with

tumor invasion. In the axial plane, the tumor mass was filling the left breast and a dislocated nasal septum was evident.

- This paper focused a single clinical case which could not be extrapolated to all cases of RMS on head and neck. However, due to scarcity of analogous clinical cases and needing to better comprehend this condition, this report could be useful for clinical practice, including differential diagnosis options and diagnosis by clinical or microscopic similarities.

Reviewer (00071178):

Q. Thank you and Minor Language Polishing

Comments: We ameliorate the english phraseology and we thank you for your contribution.