Reviewer's report

Title: Leiomyosarcoma with partial rhabdomyoblastic differentiation: First case report of primary cardiac origin

Version: 1 Date: 6 December 2010

Reviewer: augusto orlandi

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The Authors describe a case of cardiac sarcoma of left atrium that they diagnosed a leiomyosarcoma with rhabdomyoblastic differentiation. I have some major criticisms:

1) Macroscopic and microscopic findings they reported are not confident with the diagnosis of leiomyosarcoma; the overall appearance is that of a solid-myxoid tumor, with no hypercellular and typical spindle cell areas, nor typical nuclear and perinuclear details. Also necrosis and mitosis evidence is lacking. Additional images and new immunohistochemical stainings at low magnification are needed, since the Authors reported about 70% of a-SMA positive cells, but in the reported images only few cells are a-SMA positive. Moreover, leiomyosarcoma can also express cytokeratins, and this should be verified.

2) As presented here, my preferred diagnosis for this case is undifferentiated sarcoma with some rhabdomyoblastic features (that are quite limited in the documented evidences), that are sometimes reported in this type of cardiac tumors. In that sense, the differential diagnosis in the discussion is clearly incomplete. The Authors should also consider and discuss the differential diagnosis with other a rare rhabdomyosarcoma and/or rhabdomyoma of the heart.

3) A clinical image should be added to document the involvement of left atrium.

Minor comments:
Language revision is needed

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.