Reviewer’s report

Title: Advocacy of diagnostic criteria for maxillary incisive canal cysts based on alteration of normal maxillary incisive canals according to aging in Japanese populations

Version: 0 Date: 28 Jul 2019

Reviewer: Roman Fischbach

Reviewer's report:

General comments:

This is a well written and well performed retrospective analysis regarding normal anatomy and configuration of the maxillary incisive canal in comparison with a patient group with maxillary incisive canal cysts.

The current work gives very detailed information on the CT anatomy of the maxillary incisive canal in a large selected group of patients with clinical indication for CT imaging but without symptoms of maxillary incisive canal cyst. The authors could show that there is a tendency towards enlarged maxillary incisive canal with advancing age. This observation leads to suggest a larger cutoff of 7 mm when suspecting maxillary incisive canal cysts in the elderly.

Specific comments:

Title: OK

Abstract:

The background of the study does not seem to be the „determination of criteria" but rather description of imaging findings in CT and proposal of cut-off values to differentiate normal incisive canal from incisive canal cyst.

I suggest you change the wording accordingly.

Introduction

The introduction is quite long and can be shortened. Some aspects (e.g. the paragraph dealing with causes for only few papers dealing with the maxillary incisive canal anatomy, page 4, paragraph 2) can be transferred to the discussion.
Materials and Methods

First sentence: Please make clear that the normal subjects were selected.

3rd paragraph: Please give some more information on the scan protocol (Field of view, kV, mAs, etc.)

The paragraph describing the analysis of course and direction is somewhat difficult to understand. Try to be consistent with the terminology when referring to direction (angulation) and course (curvature).

Results

The mean attenuation of incisive canal cyst in patients in their 30ies and 40ies were remarkably higher than in other age groups and in the controls. However, the authors did not report a statistical difference nor did the point out this deviation in CT numbers. Do you have an explanation for this observation? Did you perform a test on age and group or were all measurements compared only based on normal versus patients with cyst? You should elaborate on this in the discussion.

You focus a lot on the normal anatomy. In patients with incisive canal cysts only diameter and CT attenuation is reported. All other features (course, shape, direction, etc) are not mentioned. I suggest you include some more detail on the patient group and underlying anatomy as well as cyst morphology.

Discussion

The discussion can be more concise if you try to avoid some redundant information or statements.

One limitation of the study is the uneven distribution of patients an normals. 50 % of normal individuals are below age 40 whereas only 30% of the patients fall into this group.

References

OK
Figures

OK

Since the article reports on incisive canal cyst I suggest you include at least one imaging example of a cyst.

Tables

Table 6 can be omitted. The paragraph in the results section describing the findings is clear enough.

Table 8 can be omitted. The paragraph in the results section describing the findings is clear enough.

Table 10 can be omitted. The paragraph in the results section describing the findings is clear enough.

**Level of interest**

Please indicate how interesting you found the manuscript:

An article whose findings are important to those with closely related research interests

**Declaration of competing interests**

Please complete a declaration of competing interests, considering the following questions:

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