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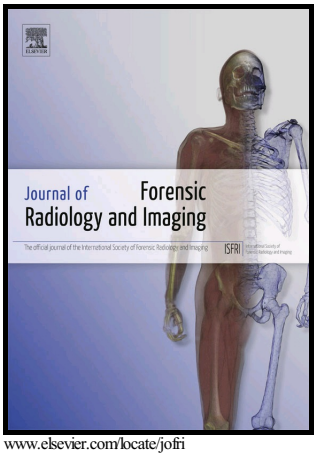

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Three-dimensional volumetric analysis of frontal sinus using medical software

Alexandre Hacl[1], André Luiz Ferreira Costa[1], Juliane Mayara Oliveira[2], Maria José Tucunduva[2], José Raul Girondi[2], Ana Carla Raphaelli Nahás-Scocate[1]

[1]Department of Orthodontics and Radiology, UNICID (University of São Paulo City), São Paulo, SP/ Brazil

[2]School of Dentistry, UNICID (University of São Paulo City), São Paulo, SP/ Brazil

*Correspondence to: Department of Orthodontics and Radiology, UNICID, Rua Cesário Galeno 448, Bloco A. Tatuapé, São Paulo, SP- CEP 03071-000. carlanahas@yahoo.com.br

ABSTRACT

Objective:

to investigate the volume and linear measurements of the frontal sinuses by means of a three-dimensional software using helical computed tomography images.

Materials and Methods:

The samples consisted of 36 tomographic images from 22 women and 14 men aged between 18 and 86 years old. The ITK/SNAP software was used for image segmentation, analysis of volume data, and linear measurements (i.e. height, width and depth).

Results:

The mean volumes of the left and right frontal sinuses were 3.945 mm^3 (SD=2.803) and 3.423 mm^3 (SD=2.835). The mean linear measurements were the following: right-side axial depth of 16.1 mm (SD=7.6), left-side axial depth of 17.0 mm (SD=5.8), right-side sagittal height of 19.0 mm (SD=11.1), and left-side sagittal height of 20.5 mm (SD=9.8), with no statistically significant differences. The right-side axial width of 19.0 mm (SD=6.8) and left-side axial width of 22.4 mm (SD=9.1) in women and right-side axial width