

LETTER TO THE EDITOR

A comparable study of the diagnostic performance of orbital ultrasonography and CBCT in patients with suspected orbital floor fractures: some considerations

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To the Editor,

We read with special attention one of the latest articles entitled “A comparable study of the diagnostic performance of orbital ultrasonography and CBCT in patients with suspected orbital floor fractures”¹ and we would like to discuss some points that caught our attention.

The first refers to the fact that patients in the study underwent two imaging tests using ionizing radiation (CT and CBCT) in order to compare them, which brings considerable ethical implications. Ionizing radiation should be used only when absolutely necessary and should never take place when the goal is just research. CBCT examinations should be performed only for valid diagnostic or treatment reasons and with the minimum exposure necessary for adequate image quality.² In fact, all CBCT scans must be justified by an individual approach and the potential benefits for patients should always outweigh the potential risks.³ Surprisingly, the ethics committee of Tabriz University of Medical Sciences approved this study.

The choice of three different examiners, one for each imaging method (CT, CBCT and ultrasonography) used in the study, also deserves to be discussed since it makes the comparison of results difficult and uncertain. The authors mentioned that examiners were experienced oral and maxillofacial radiologists and that is good, but

not enough. For scientific purposes, it would be desirable to have more than one trained and calibrated examiner for each examination modality. We understand it would be hard to evaluate the reproducibility of the examiner at ultrasonography, because the own evolution since the traumatic event could produce differences between first and second evaluations. Direct contact with patient by itself already imputes a bias in the assessment. In this modality, the evaluation could be by consensus among examiners.

Finally, one of the study objectives was to assess the utility of ultrasonography in detecting clinically suspected fractures of the orbital floor in patients without severe or complex head and face injuries. However, how to define the complexity? Although clinical signs can lead to a suspicion of minor severity, how to ensure fracture extension with only ultrasonography? How to ensure that there were not other fractures in areas inaccessible by ultrasonography? Anyway, CT would be necessary to complement the diagnosis.

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