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The use of ultrasound in the diagnosis of isolated fractures of the zygomatic arch

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Introduction: In recent years, computed tomography (CT) scan has become an alternative to conventional radiography, but the utility of ultrasound view in detecting zygomatic arch fractures has been rarely evaluated.

Aims: The aim of this study was to evaluate accuracy of ultrasonography in detecting zygomatic arch fractures.

Methods and Material: 15 patients (9 men, and 6 women) with clinical signs of midfacial fractures that each one's CT scan findings show unilateral zygomatic arch fracture were selected. For all the patients ultrasound examinations were performed bilaterally .All the sonograms were taken and interpreted by the same sonologist who was not aware of the CT scan results.

Statistical Analysis Used: Data were analyzed for calculating sensitivity and specificity of ultrasonography in detecting zygomatic arch fractures.

Results: Ultrasound was able to assess the fractured arches with sensitivity of 100% (no false negatives) and not fractured arches with specificity of 100% (no false positives).

Conclusions: Ultrasound is a useful tool in imaging zygomatic arch fractures in initial investigations, and can help to reduce the total number of diagnostic radiographs and overall radiation exposure.

Keywords: Ultrasonography; Zygomatic arch; Fracture; Bone.

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