

Utility of digital volume tomography in maxillofacial trauma

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Purpose: To assess the diagnostic quality of images generated using the newly developed digital volume tomography (DVT) system and comparing them with conventional images from patients with maxillofacial trauma.

Materials and Methods: The study population included 22 male patients aged 18 to 60 years with a history of maxillofacial trauma. Each patient had undergone conventional radiographic and DVT examinations to analyze the number of fracture lines in the jaws and to compare the images for their diagnostic quality by an oral radiologist and a general radiologist using the chi-square test.

Results: A statistically significant difference was found between the number of fracture lines evaluated on the conventional radiographs and on DVT, especially for condylar head (7) and the midface (4.41 to 4.57), zygomaticomaxillary complex and Le Fort fractures, respectively.

Conclusions: The detection of fracture lines and visualization within the mandibular-maxillary area using DVT was superior to using conventional radiographs.