

***EVALUATION OF CONDYLAR FRACTURES OF
TMJ BY RECONSTRUCTED THREE DIMENSIONAL
COMPUTERIZED TOMOGRAPHY***

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EVALUATION OF CONDYLAR FRACTURES OF TMJ BY RECONSTRUCTED THREE DIMENSIONAL COMPUTERIZED TOMOGRAPHY

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Abstract

Condylar process fractures represent one of the most common facial fractures.

The area of the condyle represents a rather-challenging area for conventional radiography. The introduction of CT scan made visualization of the TMJ amandable. It is the purpose of this abstract to present the three-dimensional CT scan used in the area of condylar fractures. Imaging using this technique allow surgeon to visualize spatial relationship that formerly had to be conceptualized.

Ten trauma patients were used in this study. Routine X-ray films, two dimensional CT and three dimensional images were obtained on each case. Results showed the marked superiority of the three dimensional scan in diagnosis and then helped in treatment planning of those complex fractures.

In conclusion, we recommended the utilization of three dimensional CT scan to examine the area of TMJ speciality if treatment is anticipated by the surgeon.

Fractures of the condylar process of TMJ are one of the most common type of injury due to facial trauma. Fractures in this region are often accompanied by oedema which complicate the clinical examination and may obscure the underlying skeletal injury. The degree of bony damage in the condyle is often be assessed from radiographs (John et al., 1982).

Fractures of the mandibular condyle are frequently found in conjunction with a contralateral fracture of the body of the mandible at the canine region. These are extracapsular fractures which are more likely to occur in subcondylar area and involve portion from immediately beneath the condylar head to the junction of the condylar neck with the ramus. The most common site of the condylar fracture is at the base of the condylar neck. The fractured condyle are displaced from the glenoid fossa or occupy an altered position within it. This displacement commonly occur in a medial direction (Giblisco, 1985).

The area of the TMJ has been radiographed from almost every conceivable direction. The frontal projection especially Town's view is commonly used for detection of subcondylar fracture with inferior displacement (Manson, 1979).

All the radiographic views produce a great superimposition of other structures upon TMJ image. The superimposition is due to the location of the TMJ in the base of the skull and the fact that it is close to the petrous portion of the temporal bone. Inappropriate selection of angle of the views may mask the significant changes that help in diagnosis of condylar fractures (Henny, 1974).

In an attempt to remove or blurr-out the superimposition of the overlying structures on TMJ region. The use of computerized tomography in the diagnosis of TMJ fractures is preferable more than the conventional radiography, (Eckerdahl & Lundberg, 1976). Computerized tomography including pleuridirectional tomography to avoid much of the problem of image superimposition proved helpful. Selection of the correct plane of tomographic section becomes extremely critical in successful detection of any injury in the condyle (Manziona et al., 1983).

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