

Diagnostic potential of pseudo-dynamic MRI (CINE mode) for evaluation of internal derangement of the TMJ.

[Behr M](#), [Held P](#), [Leibroch A](#), [Fellner C](#), [Handel G](#).

Department of Prosthetic Dentistry, University of Regensburg, Germany.

In addition to the patient's history and a thorough clinical investigation, magnetic resonance imaging (MRI) of the temporomandibular joint (TMJ) has been introduced to complete the findings for the diagnosis of internal derangement of the TMJ. However, 'dynamic information' is desirable to help us to understand the mechanism of internal derangement. This information is given for example by electronic axiography recording systems. The lack of any ability to assess joint function dynamically in MRI is a point of criticism. Using a computer-driven pseudodynamic MRI system (CINE mode) 'dynamic information' should be now available. In this investigation 21 patients with TMJ disorders were examined using both conventional static MRI and CINE mode. For the diagnosis of an anterior displaced disc with or without reduction in 18 cases (86%) it was only necessary to consider two static MRIs: a closed mouth position and a maximal open mouth position. Comparison showed there was no advantage in using CINE mode. Contrast and resolution of the static MRIs were shown to be better and so additional findings such as joint effusion and disc deformation could be diagnosed on static MRIs with greater certainty. Only in three (14%) cases was the dynamic information from CINE mode useful for the diagnosis of the displacement of the disc.

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