

OBJECTIVE: The aetiology of temporomandibular disorders is complex, and individual etiologic factors are not sufficiently defined. Bruxism, in its centric or eccentric form, is becoming a frequent problem for dentists. The purpose of this study is to show factors of the condyle leading in patients with bruxism by optoelectronic pantography, and to establish the possibility of using optoelectronic pantography in the diagnostic procedure of TMD.

METHODS: Patients were selected (N = 42), with incomplete sets of teeth, without prosthodontic appliances and with traces and symptoms of TMD. After completing the specific history questionnaire (Helkim's index), a clinical check up (Bumann's manual functional diagnostics) and plaster cast analysis in totally adaptive articulator CAR (Dentron), patients with bruxism (N = 22) and without bruxism (N=20) were selected. During the study optoelectronic String-condylocomp LR3, Dentron, D-Höchberg (software JAWS 30) was used.

RESULTS: This study showed the possibility of applying optoelectronic pantography in TMD diagnostics and compares history, clinical and condylographic parameters in TMD patients with and without bruxism. It was also confirmed that patients with bruxism have more frequent muscular disorders (neuromuscular discoordination), while those without bruxism have more frequent disorders of the disk-condyle complex (dorsal, dorsocranial compression and anteromedial dislocation without repositioning) and finally differences exist in the symptomatics of TMD patients with and without bruxism.

CONCLUSION: Optoelectronic pantography enables us, by using relatively easy methods, to determine a more accurate diagnosis, highly important when choosing therapeutic methods and control of the aforementioned disorders.

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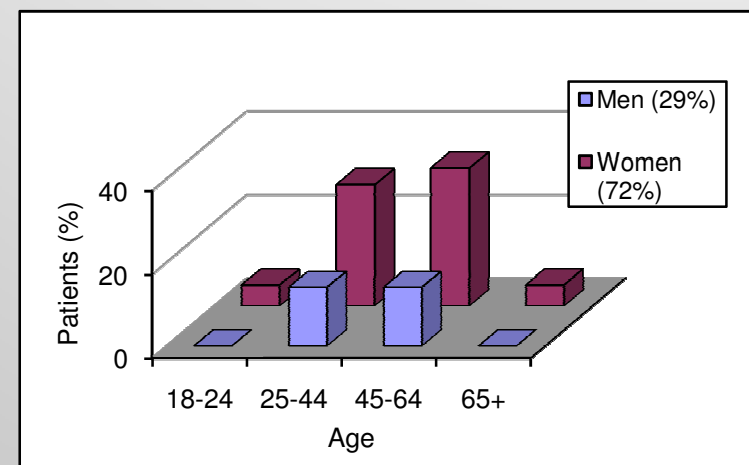


Fig1. Patients distribution by sex and age

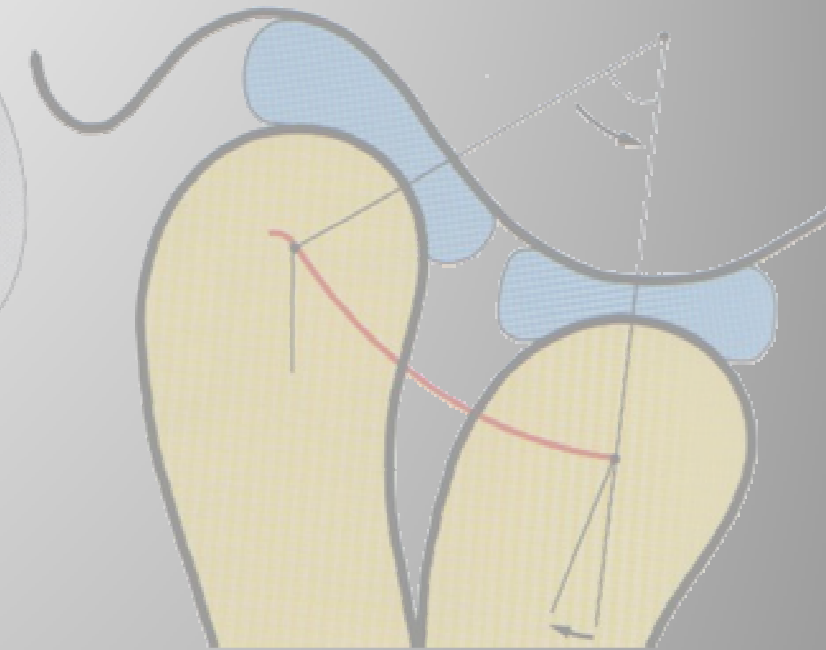
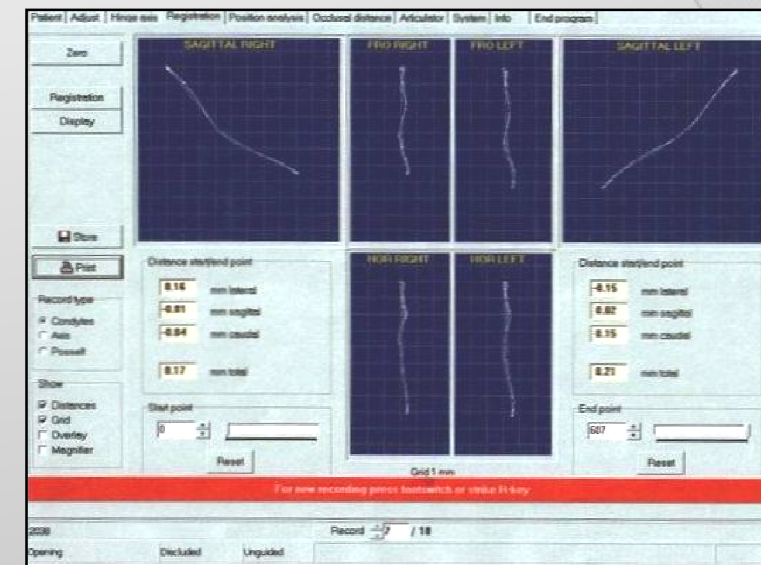


Fig2. Condyle movement on mouth opening, diagnostics with String Condylcomp LR3

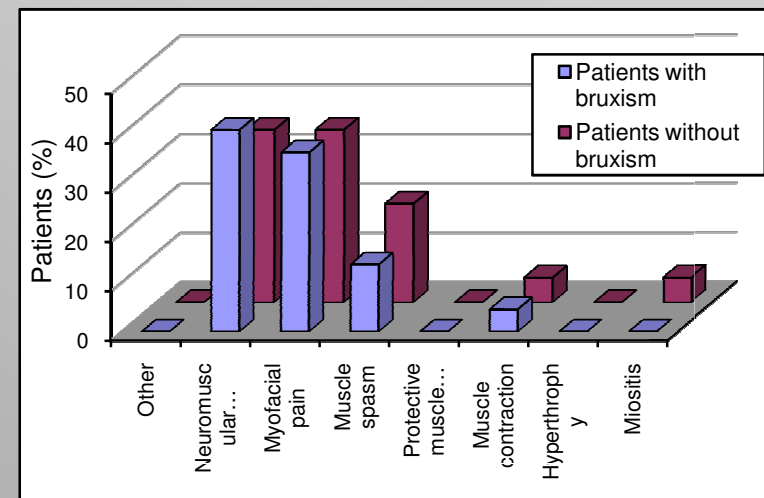


Fig3. Distribution of primary diagnosis according to muscle condition

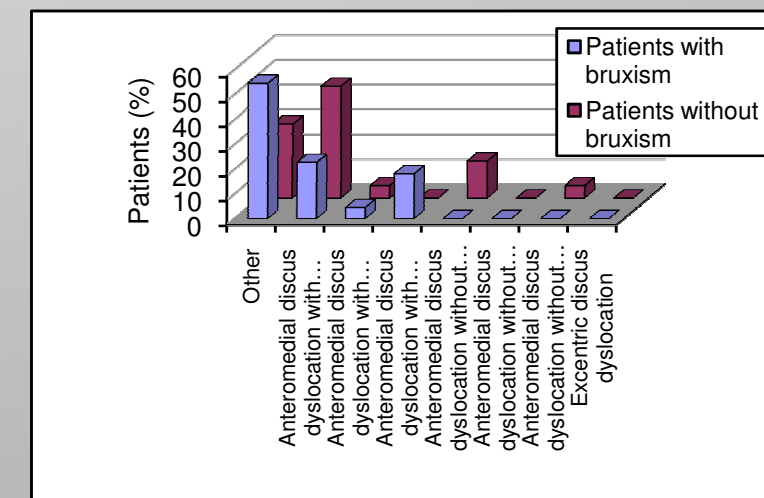


Fig4. Distribution of primary diagnosis according to disc condition

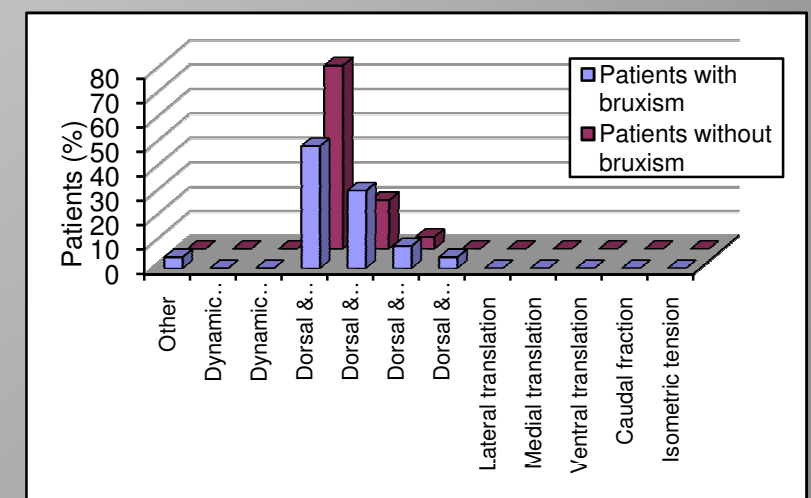


Fig5. Distribution of primary diagnosis according to joint condition

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