

hours/day, and the lowest in a female patient with a mean value of 4.2 hours/day. The duration of daily wear-time was much shorter than at night. The difference was statistically significant.

CONCLUSION: Orthopaedic treatment with functional appliances demands strong cooperation regarding wear-time during the day to establish dynamic balance of the orofacial area. However, measured day time wear in these patients was lower than prescribed.

SP356 MINIMALLY INVASIVE DIAGNOSIS OF TEMPOROMANDIBULAR JOINT DISORDERS: ULTRASONOGRAPHY VERSUS MAGNETIC RESONANCE IMAGING

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AIMS: To show the importance and reliability of ultrasonography (US) and magnetic resonance imaging (MRI) in the diagnosis of temporomandibular joint (TMJ) disorders in patients affected by orofacial pain and dysfunction with dentofacial and skeletal malocclusions.

SUBJECTS AND METHOD: Thirty patients assessed by US examination performed with a 11-18 MHz linear transducer. US offers specific advantages because it is non-invasive, does not require sedation or general anaesthesia (which facilitates follow-up examinations), is easily accessible and can be combined with clinical assessment (interactivity). Agitation of the patient is rarely a problem, as MRI and multiple locations can be assessed during a single session. Furthermore, modern high-frequency US transducers used by experienced examiners can provide unsurpassed resolution of the superficial musculoskeletal structures.

RESULTS: Morphological alterations and positions of mandibular condyles in the glenoid fossa, condylar synovitis, disc displacement and joint effusion were detected.

CONCLUSION: US is a non-invasive and inexpensive diagnostic procedure that can be suggested for evaluation of TMJ disorders, with particular accuracy in the detection of disc displacement and joint effusion. Limitations are especially related to the scarce accessibility of the medial part of the TMJ structures, and the need for trained and calibrated operators.

SP357 EFFECTS ON THE MID AND LOWER FACE SOFT TISSUES AFTER DOUBLE-JAW ORTHOGNATHIC SURGERY

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AIMS: To cephalometrically assess the hard and soft tissue response of skeletal Class III patients treated by bimaxillary orthognathic surgery, and to evaluate the correlation between the two.

SUBJECTS AND METHOD: Forty-nine patients, 20 males and 29 females, aged 19 to 37 years, who had undergone two-jaw orthognathic surgery, with no additional surgical procedures on the midface or chin. Treatment planning for patients who require orthognathic surgery should include both hard and soft tissue cephalometric analysis. Although the hard tissue analysis will show the nature of the existing skeletal discrepancy, it is incomplete in providing information concerning the facial form and proportions of the patient.

RESULTS: After bimaxillary surgery there was a strong correlation in the horizontal and vertical direction between all selected landmarks of the lower lip and chin, but only between superior labial sulcus and point A in the upper lip in the horizontal direction ($P > 0.1$).

CONCLUSION: The relationship between hard tissue surgery and its effect on the overlying soft tissue is extremely important in predicting the final facial profile and aesthetic changes. Patients may appear either more or less convex in their profiles than indicated by their hard tissues because of differences in soft tissue thickness, particularly at the junction of the nose and upper lip and in the region of the chin ($P < 0.01$).



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MINIMALLY INVASIVE DIAGNOSIS OF TEMPOROMANDIBULAR JOINT DISORDERS: ULTRASONOGRAPHY VS MRI

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AIM

The aim of this study is to show the importance and reliability of Ultrasonography (US) and Magnetic Resonance Imaging (MRI) in the diagnosis of the Temporomandibular Joint Disorders (TMJ) in patients affected by orofacial pain and dysfunction with dentofacial and skeletal malocclusions.

MATERIALS AND METHODS

30 patients have been assessed by ultrasonographic exams. US was performed with a 11-18 MHz linear transducer. US offers specific advantages because it is non-invasive, does not require sedation or general anesthesia (which facilitates examinations for follow-up), is quickly accessible bedside, and is easy to combine with clinical assessment (interactivity). Agitation of the patient is rarely a problem, as MRI and multiple locations can be assessed during a single session. Furthermore, modern high-frequency US transducers used by experienced US examiners can provide unsurpassed resolution of the superficial musculoskeletal structures.

RESULTS

Were detected morphological alterations and positions of mandibular condyles in the glenoid fossa, condylar synovitis, disc displacement and joint effusion.

CONCLUSIONS

Ultrasonography is a noninvasive and inexpensive diagnostic procedure that can be suggested for the evaluation of TMJ disorders, with particular accuracy in the detection of disc displacement and joint effusion. Limitations are especially related to the scarce accessibility of the medial part of the TMJ structures, and the need for trained and calibrated operators.

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