

coronal and transverse sections. Pathological maxillary sinuses presenting with mucous cysts and those with mild thickening of the membrane of the maxillary sinus (within 2-3 mm) were not considered. Acute sinusitis that showed in the above sections, visible air-fluid level or complete obstruction (empyema) of the maxillary sinus were considered.

RESULTS: Analysis of CT slices showed involvement of the maxillary sinuses in a greater proportion of patients with JIA (24%) than in healthy subjects (11%). The difference between the two study groups was statistically significant ($P < 0.01$; $\chi^2 = 5.85$). Of the 24 patients with JIA, 50 per cent showed bilateral sinusitis and 50 per cent unilateral sinusitis. In healthy patients with sinusitis, however, the percentages varied (unilateral: 36.4%; bilateral 63.6%).

CONCLUSION: Only one of 11 healthy patients showed acute sinusitis, the remaining 10 had chronic sinusitis. Of the 24 patients with JIA, only two had acute sinusitis. In most cases analyzed, therefore, the sinusitis was chronic, especially in patients with JIA. In the light of these findings, it is possible to assume a correlation between JRA and sinusitis.

SP354 ENDOCHONDRAL OSSIFICATION OF THE SPHENO-OCCIPITAL SYNCHONDROSIS: JUVENILE IDIOPATHIC ARTHRITIS VERSUS HEALTHY PATIENTS
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AIMS: To evaluate, on cone beam computerized tomographs (CBCT), any discrepancy in the age range of complete ossification of the speno-occipital suture, comparing a sample of patients with juvenile idiopathic arthritis (JIA+) with a sample of healthy patients (AIG-).

MATERIALS AND METHOD: One hundred and forty 140 CBCT of JIA+ patients between the ages of 4 and 25 years compared with a sample of 230 AIG- subjects aged between 5 and 25 years. The CBCTs of all patients had previously been evaluated because of the diagnosis of condylar disease (AIG+) or for cephalometric evaluation. The sections obtained were studied in three planes of space with dedicated software for three-dimensional (3D) volumetric reconstruction. The radiographic images were divided into two groups: the first in which there was complete speno-occipital ossification, characterized by the absence of a radiolucent band separating the two bones considered and the second in which bone fusion was not observed.

RESULTS: Direct observation of the 3D images showed that: in AIG+ subjects no female presented complete speno-occipital ossification before 10 years and no male patient before 11 years. Also no female subject had incomplete ossification after 15 years or any male after the age of 13 years.

CONCLUSION: With regard to females, comparable data was observed in the two samples analysed while in the male groups there were slight differences. Both JIA and its therapy do not significantly change the growth of the cranial base or the mean age ossification of the speno-occipital suture.

SP355 OBJECTIVE WEAR-TIME REGISTRATION OF THE MODIFIED FRÄNKEL FUNCTION REGULATOR 3: MICROELECTRONIC EVALUATION
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AIMS: To objectively evaluate the wear-time during orthopaedic treatment with the modified Fränkel function regulator 3.

SUBJECTS/MATERIALS AND METHOD: The wear-times of 20 patients (10 boys, 10 girls) undergoing orthopaedic treatment with the modified Fränkel function regulator 3 by Farčnik (2007) were measured, registered and analysed using the TheraMon microelectronic device (Gschladt, Hargelsberg, Austria) over a 6 month treatment period. Time-wear was registered every month and statistically evaluated. The values were compared with the recommended wear-time values.

RESULTS: The mean value wear-time for the 20 patients was 9.3 hours per day, compared with the prescribed 20 hours/day. The wear-time behaviour of the patients was mainly at night, with some days without wearing the appliance and some afternoon wearing periods. The highest measured wearing time was in a female patient with a mean value over 19



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ENDOCHONDRAL OSSIFICATION OF THE SPHENO-OCCIPITAL SYNCHONDROSIS: JUVENILE IDIOPATHIC ARTHRITIS VS HEALTHY PATIENTS

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AIM

The aim of this study is to evaluate, by Cone Beam Computerized Tomography (CBCT), any discrepancy about the age range of the complete ossification of the speno-occipital suture, comparing a sample of patients with Juvenile Idiopathic Arthritis (JIA+) with a sample of healthy patients (AIG-).

MATERIALS AND METHODS

We analyzed 140 CBCT of Juvenile Idiopathic Arthritis patients (JIA+) between the ages of 4 and 25 years treated at the Department of Orthodontics, University of Milan, and compared with the results of a sample of 230 healthy patients (AIG-) aged between 5 and 25 years being treated in the same department. All the patients have already had the TC we evaluated in this study because of the diagnosis of condylar disease (AIG+) or for the cephalometric evaluation. Sections obtained were studied in three planes of space through the use of dedicated software for the three-dimensional volumetric reconstruction. According to the radiographic images observed, were divided into two groups: the first one in which there is a complete speno-occipital ossification, characterized by the absence of radiolucent band separating the two bones considered; a second one in which is not observed bone fusion.

RESULTS

Direct observation of three-dimensional images available to us shows that: in subjects AIG+ no female patient presents complete speno-occipital ossification before 10 years and no male patient has the same ossification before the 11 years. Also is noted that no female subject has incomplete ossification after 15 years or any male subject after the age of 13.

CONCLUSIONS

The results we obtained from this study allow us to say that considering female groups we observed comparable data in the two samples analyzed; instead in male groups there are slight differences. We can affirm that both juvenile idiopathic arthritis and its therapy does not significantly change the growth of the cranial base or the mean age ossification of speno-occipital suture.

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