

## **Analysis of Occlusal Contacts Recorded with Intraoral Scanner in Patients with Juvenile Idiopathic Arthritis**

**Objectives:** to analyze occlusal contacts in young patients with juvenile idiopathic arthritis in comparison with young adults without arthritis.

**Materials and methods:** 21 young patients with diagnosis of juvenile idiopathic arthritis (according to ILAR criteria) aged from 18 to 34 years (mean age  $23.14 \pm 4.01$ ) who included 12 females and 9 males (research group) and 20 young adults without arthritis aged from 18 to 35 years (mean age  $24.05 \pm 4.77$ ) who included 10 females and 10 males (comparison group) were examined at Dental Medical Center of Bogomolets National Medical University. Intraoral scans of the jaws and bite records were obtained with Medit i500 intraoral scanner. Presence of premature contacts was checked in maximal intercuspal position as well as during protrusion and laterotrusion. Bite class according to Angle's classification was also estimated.

**Results:** Within the research group 5 patients (23.8%) had premature contacts in maximal intercuspal position, 6 patients (28.6%) – during protrusion and 7 patients (33.3%) - during laterotrusion; 10 patients (47.6%) had I class bite, 7 patients (33.3%) - II class bite, 4 patients (19.1%) – III class bite; Within the comparison group 3 patients (15%) had premature contacts in maximal intercuspal position, 3 patients (15%) – during protrusion and 4 patients (20%) - during laterotrusion; 12 patients (60%) had I class bite, 6 patients (30%) - II class bite, 2 patients (10%) – III class bite.

**Conclusions:** higher level of premature contacts as well as malocclusion prevalence were revealed in young patients with juvenile idiopathic arthritis in comparison with young adults without arthritis. That's why such patients may need proper occlusal correction to prevent further temporomandibular disorders development.

**Key words:** dental occlusion, bite registration, canine guidance, malocclusion, juvenile arthritis.

The authors declare the absence of any conflict of interest.