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### Comparison of occlusal function in children with and without cleft lip and/or palate

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**Abstract** The bite force prior to orthodontic treatment was determined to examine whether occlusal and masticatory functions in children with cleft lip and/or palate (CL/P), but with most teeth participating in occlusion, are inferior to those in children with normal occlusion without CL/P. The subjects were 31 children (20 boys and 11 girls) with CL/P and 26 children (10 boys and 16 girls) with normal occlusion without CL/P. All the children were 4 years old. To examine occlusal function, we measured the occlusal contact area, bite pressure, and bite force using bite pressure detection film “dental prescale” (R-type) and the “Occluser” system (Fuji Photo Film Co.). The average and maximum bite pressures in children with CL/P were significantly higher than those for children with normal occlusion without CL/P. The bite pressure and bite force in children with CL/P were similar to or greater than those for children with normal occlusion without CL/P, provided that the children with CL/P had only a slightly asymmetric dental arch and that most teeth participated in occlusion. These results suggest that occlusion functions in children with CL/P are not inferior to those of children with normal occlusion without CL/P.

**Key words** Bite force, Cleft lip and/or palate, Deciduous dental arch, Dental prescale, Occlusal contact area

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