Diagnosis and Treatment in Unilateral Condylar Hyperplasia

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Abstract

Unilateral condylar hyperplasia (UCH) is an uncommon disease involving progressive facial asymmetry. The aim of this research was to perform an analysis of the diagnosis and treatment of patients with UCH in a clinical series. An observational retrospective study was performed on subjects with progressive facial asymmetry in the lower third of the face; all the subjects were under treatment with condylectomy and orthodontics to improve occlusion and face balance. Variables such as age, sex, clinical type, SPECT (single photon emission computed tomography) intensity and a requirement for secondary surgery were included; the Shapiro Wilk test was performed to analyze the normality of the data and nonparametric analysis and the Kruskal-Wallis or Mann-Whitney tests were used to assess the association between the SPECT difference and the variables, where 2-tailed p values < 0.05 were considered to be statistically significant. Forty-nine patients between 10 and 45 y.o. (average age: 19.1 ± 7.4 y.o.) were included in the study. There were 41 female (83.6%) and 8 male (16.4%) subjects. The SPECT analysis comparing the right and left condyles with more than 10% in caption of the isotope was present in 46 subjects; the results obtained using SPECT were not statistically related to the age or sex of the sample (p = 0.277). The patients were classified into clinical types I, II and III, and no correlations could be confirmed between the clinical type and other variables. High condylectomy was conducted on all patients, among which 14 patients underwent a secondary surgery for orthognathic or cosmetic treatment, and was not related to the initial variables used in diagnosis (p = 0.98); interestingly, the second surgical treatment was more present in the clinical type I and in subjects under 16 years old with no statistical differences. Clinical analysis, medical records, 3D imaging and SPECT should be used as a complementary analysis in assessing the diagnosis of UCH and progressive facial asymmetry. © 2023 by the authors.

Author keywords

condylar hyperplasia; facial asymmetry; orthognathic surgery and TMJ