



MANDIBULAR SAGGITAL SPLIT OSTEOTOMY VS MANDIBULAR DISTRACTION OSTEOGENESIS IN TREATMENT OF NONSYNDROMIC SKELETAL CLASS II PATIENTS

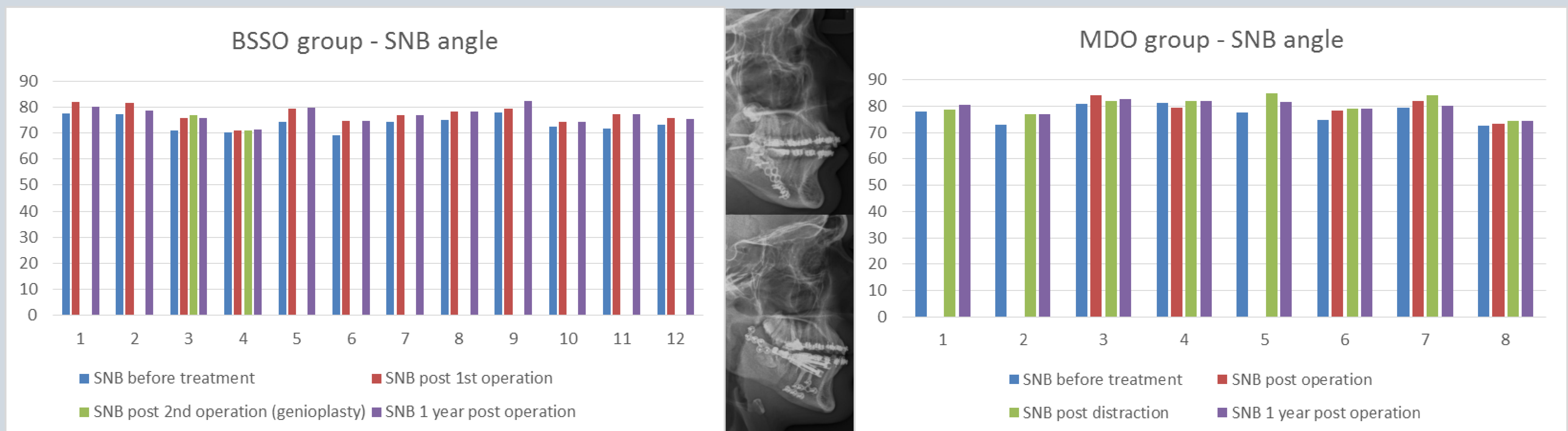


Aim

The purpose of presentation is to show the clinical outcome of treatment of patients with skeletal class II malocclusion. Authors compared the results of cephalometric analysis regarding 20 patients, who undergone mandibular distraction osteogenesis (MDO – 8 patients) and bilateral sagittal split osteotomy (BSSO - 12 patients) at Specialist Children's Hospital in Olsztyn, Poland between 2011 and 2013; performed by the same surgeon (KD). All patients were prepared orthodontically before surgery. In both groups any concomitant procedures, including maxillary osteotomy or genioplasty, were done if indicated.

Materials and methods

The sample consisted of 74 lateral cephalometric x-rays. The mean age of the subjects was 17,9 years (MDO 17,14; BSSO 19,85). Criteria for cephalometric comparison were angular cephalometric variables: SNB (Steiner analysis with modifications). The criteria for inclusion into this study were as follows: males and females with skeletal Class II pattern plus dentofacial and dental abnormalities like skeletal open bite. All radiographs were traced by 1 examiner twice using LightningCeph software. In both groups cephalograms were taken: 1) preoperatively 2) postoperatively 3) post-distraction 4) post genioplasty 5) follow-up: 1 year after operation



Results and discussion

Our comparison study showed that it was no statistically significant difference between results of BSSO postoperatively and MDO post-distraction. However, there is a need of long-term data on stability of both methods. Results of this study showed that there was no statistically significant difference between the post-operative results of both methods regarding SNB angle ($p > 0.05$; $p = 0.10738$), but the increase of SNB in every group was statistically significant ($p < 0.05$): in BSSO group $p = 0.04292$ and MDO $p = 0.12387$, respectively.

Due to severe type of malocclusion of patients, the results show the improvement of SNB angle in BSSO group ($3,4^\circ$), but does not exceed the norm – back position of B point. In MDO group the improvement of SNB angle is smaller ($2,62^\circ$), but the mean value reaches the norm of position of B point.

Conclusions

Study shows that MDO may offer another option for treatment of skeletal class II malocclusions in growing children.