

Natural Progression of Non-Synostotic Plagiocephaly

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Background Despite having a good understanding of the causes and treatment for deformational plagiocephaly, the need for treatment has yet to be determined conclusively. The purpose of this study was to determine the natural progression of non-synostotic plagiocephaly in children between the ages of 18 and 48 months. The study also aimed to determine parent impressions about the current head shape of children with untreated deformational plagiocephaly.

Methods A survey and follow-up scan were completed for twenty-two children diagnosed with deformational plagiocephaly of severity level 3 or higher who declined orthotic treatment. Subjects were between the ages of 18 and 48 months at the time of the study. Cranial vault asymmetry index (CVAI), cephalic ratio (CR), and severity level were compared from the initial diagnosis scan and the current scan.

Results Of the 22 subjects, 17 showed an improvement in CVAI, with an average decrease of 1.6%. CR had an average decrease of 4%. Parents perceived the head shape to have "improved" in 14, "stayed the same" in 6, and were unsure of any change in 4 subjects. Parents were "very satisfied" in 11, "somewhat satisfied" in 6, and "not very" satisfied in 5 subjects.

Conclusions Although there was a decrease in CVAI, it was not large enough to move subjects into a non-treatment severity level. 77% of subjects would still be recommended for orthotic treatment based on their current head shape. Parents are satisfied with the current shape of their children's heads despite any asymmetry that may still be present.

Key Words: non-synostotic, deformational plagiocephaly, untreated, natural progression

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