

calculated using Kiresuk's formulae considering that all GAS scores had the same importance (non weighted T-score) or weighting GAS scores according to its importance for participation and activity (weighted T-score). Means of raw scores were then calculated according to the same weighting criteria. Normal distribution of T-scores and means were assessed by a Kolmogorov-Smirnov test and their correlation by Spearman's Rho.

A total of 541 GAS scales were included, out of which 537 GAS have been analyzed, concerning 139 botulinum treatments. T-scores (56.77 ± 10.2) and means of raw scores (0.49 ± 0.74) were highly correlated ($P = 0.99$). Weighted T-scores and weighted means had a normal distribution. Non weighted T-scores and means did not have a normal distribution ($P = 0.013$ and 0.011).

As T-scores and means of raw scores were highly correlated in our study, it seems sensible to replace T-score calculation by a simple manual calculation of a mean of raw scores in clinical daily practice. Calculating T-scores does not necessarily imply that the distribution of T-scores will have a normal distribution. Implication are discussed in term of group effects interpreted through T-scores.

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Cervicocephalic correction mattress: A new therapy in plagiocephaly and torticollis

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Introduction.– The rising incidence of plagiocephaly is documented since 1992 and the adoption of supine sleep position. The present therapy included repositioning interventions and physiotherapy orthotic. An exclusive cranial correction (helmet) is widely accepted in severe positional plagiocephaly with variable tolerance. We developed a mattress to act to plagiocephaly and also the limited head rotation.

Method.– A prospective study of 18 infants (middle-age: 5 months) with nonsynostotic plagiocephaly and limited head rotation. Two-dimensional head tracings were taken for each infant, before and after therapy. We obtained Cephalic Index (CI) for the brachycephaly and Cranial Vault Asymmetry Index (CVAI), and we classified each infant in five degree of severity of plagiocephaly (five is the most severe) with the CVAI.

Results.– After therapy we obtained a decrease of CVAI 8.69 to 5.33 ($P < 0.0001$, paired t test) and plagiocephaly severity degree 3.6 to 5.33 ($P < 0.0001$, paired t test) without modification of CI 0.91 versus 0.92 ($P = 0.503$, paired t test). The result is correlated to the beginning age of therapy (Spearman $r = 0.70$, $P = 0.008$). More the therapy begins early more it's effective.

Discussion and conclusion.– We demonstrated the efficacy of the mattress for the cranial asymmetry. The mattress doesn't increase the brachycephaly (CI). We confirmed the advantage of an early therapy.

Further reading

Hutchison B, Hutchison L, Thompson J, Mitchell E. Plagiocephaly and brachycephaly in the first two years of life: a prospective cohort study. *Pediatrics* 2004;114:970.

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