THE RELATIONSHIP BETWEEN PLAGIOCEPAHLY AND DEVELOPMENTAL DELAYS

For many years it was widely accepted that mild and moderate cases of plagiocephaly and brachycephaly were purely cosmetic in nature. However, in recent years, studies indicate that some developmental delays, cognitive impairment, and academic limitations are associated with head flattening during infancy.

A 2016 study published in the Journal of Craniofacial Surgery identified a group of infants diagnosed with deformational plagiocephaly (DP) who had no prior intervention.[2] They measured the cranial deformity and administered the Bayley Scales of Infant and Toddler Development, Third Edition (Bayley-III) in order to assess for potential delays.

Twenty-seven infants were included in the study, all between the ages of 4 and 11 months. Developmental delay was observed on the composite language and composite motor scales (not the cognitive scale). Interestingly, they also found that the severity of flattening did not correlate with scores on any Bayley-III scales.

In 2017, the Journal of Developmental and Behavioral Pediatrics published the findings of a systematic review of several databases investigating the relationship between a plagiocephaly diagnosis and developmental or other delays.[3] They extracted data from relevant studies in regard to sample, follow-up, design, and findings. Of the 1315 articles reviewed, 19 met the inclusion criteria for the purposes of this study.

In 13 of 19 studies, the researchers found a positive association between plagiocephaly and developmental delay, with several studies showing “strong” methodological quality. Delays in motor skills, language and cognition were detected in infants as young as six months old and remained for up to 3 years The most commonly reported delay was motor skills, including sitting up and crawling, followed by language delays.

A 2019 study published in the Journal of the American Academy of Pediatrics evaluated 187 school-aged children with a history of positional plagiocephaly or brachycephaly.[1] When compared with a similar number of control participants, researchers found that children with moderate or severe deformational plagiocephaly scored lower than controls on cognitive and academic measures.

The researchers state that these findings should not be interpreted as causational, and recommend its use as a risk factor when assessing children with moderate to severe plagiocephaly.

DISCUSSION

While these studies have detailed a relationship between a plagiocephaly diagnosis and potential delays later in life, it is considered correlational rather than causational. What this means for pediatricians and other pediatric health care providers is that when an infant receives a diagnosis of plagiocephaly in infancy, long term monitoring may be necessary.

These studies provide a vital piece of information for pediatric caregivers and health care providers about the implications of a deformational plagiocephaly diagnosis. Rather than viewing DP as an infantile issue, it may in fact be something with a much longer-lasting impact on childhood development.

SOURCES:

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