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Effective correction of ear anomalies with non-surgical ear molding

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Background: One-third of infants have ear anomalies and less than one-third self-correct. Correction of ear deformities by molding exploits the plasticity of the auricular cartilage due to circulating maternal estrogen during early infancy.

Objectives: We assess the efficacy of non-surgical ear molding in the correction of ear deformities and determine the factors that affect its outcome.

Methods: This is a prospective study over a three-year period. Consecutive full-term infants who underwent ear molding were recruited. Primary outcome was successful correction of ear anomaly. Secondary outcomes included complications and maintenance of ear shape. Factors identified include type of anomaly, age and duration of application and breastfeeding.

Results: 67 patients with a total of 105 ears were recruited. The anomalies were classified into deformations (66.7%) and malformations (33.3%). The median age group of presentation was zero to seven days old (67%). Average duration of application was 4.1 weeks. Successful correction was achieved in 86% of patients. Ear deformations achieved a significantly higher rate of successful outcome (98%) compared to malformations (64%) ($p=0.01$). Skin complications were common (46%) and attributed to our tropical climate. Patients with complications were of a higher mean age (22.1 days), compared to patients with no complications (10.6 days; $p=0.03$).

Conclusion: Ear molding is an effective non-surgical option for the treatment of ear anomalies, especially in ear deformations where successful correction was achieved in 98% of infants. Type of anomaly is an important predictor of successful correction. Early initiation of ear molding has a crucial role in minimizing complications.

Biography

Chia Hui Ling is a Consultant at Department of Plastic, Reconstructive and Aesthetic Surgery, KK Women's and Children's Hospital. She has a special interest in facial and breast reconstructive surgery and pediatric plastic surgery. In 2015, she underwent training in craniomaxillofacial surgery under the AOCMF Fellowship program in United Kingdom and further completed a Fellowship in Pediatric Plastic Surgery with the JW Lee Center for Global Medicine at Seoul National University Hospital, South Korea.

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