



ELSEVIER



## CORRESPONDENCE AND COMMUNICATION

### Collodion baby associated with congenital auricular anomalies: Postpartum splinting of a rare congenital auricular deformity

Sir,

A female full term newborn was transferred, immediately after birth, to our Intensive Neonatal Care Unit with diagnosis of collodion baby. On admission the skin surface was covered by a cornified substance of uniform texture, thinner at the joints' level, which gave the whole body a varnished appearance;<sup>1</sup> the newborn showed oedema of upper and lower limbs, ectropion, lip eversion, flattening of the nose and bilateral deformities of ear. Laboratory investigations and urinalysis were normal. Initial treatment included:

- placement in a humidified incubator and high fluid intake to avoid dehydration from transepidermal water loss
- careful attention to hygiene and body immersion in antibacterial solution to avoid infections
- applications of liquid paraffine to facilitate shedding of the membrane

The collodion membrane peeled off shortly after birth, leaving a reddish skin. Within 15 days the skin became smooth and clear. At two weeks of age, a plastic surgery opinion was requested for the associated bilateral ear deformities. Non-surgical treatment was offered to parents who agreed. Splinting was started immediately.

The splint was made from a wire core segment in a 6-French silastic tube; it was placed in the groove between helix and antihelix bilaterally and held in place with skin closure strips.<sup>2</sup> During the first week of treatment, the adhesion of the strips to the skin was difficult: the topical application of liquid paraffine produced an oily film between the strips and the skin. That film prevented the perfect holding in place of the splint. We decided to suspend the paraffine application only in the periauricular and auricular regions for the splinting time. Adhesion of the

strips was obtained and splinting treatment could be completed in six weeks, when the level of maternal oestrogens still allows the ears to be moulded.

Parents of newborns admitted to neonatal units are exposed to a variety of stress sources: they are unfamiliar



Figure 1 a, b: Right ear before and after splinting.



**Figure 2** a, b: Left ear before and after splinting.

with the potentially complex problems their infant is facing and they are unsure of the future. In our case the disfigurement of the baby was a major source of stress and anxiety.

The presence of ear deformity is rare in patients born as a collodion baby. The deformities in our case were peculiar: right ear showed a deformity limited to the upper pole and, for that, was similar to an anomaly described by Argamaso as 'Crumped ear'<sup>3</sup>; left ear presented an eversion of the auricular lobe and the upper pole with associated moderate hypoplasia at the level of the middle third. The helical groove was absent in this region. We classified it as a 'Cup ear'.

These deformities can be caused by several factors: anomalous intra- and extra-uterine forces that provide a deforming action on defined but still soft auricular structure.<sup>4</sup> According to this theory, in our case, the mechanical action of collodion membrane, during the

intrauterine life, would have prevented the correct architectural development of the ears.

These anomalies that can be corrected surgically in childhood with variable results, are best treated non-surgically. In fact, splinting of ears, when started by the first three months of life, can obtain better results than the surgery. In our case, the use of this method has achieved good results already at two and then a stable result at six weeks' treatment (Figures 1 and 2) and helped our group in relieving anxiety of the parents to a great extent in that critic situation.

Neonatal pediatricians, obstetricians, family doctors, and midwives should be encouraged to manage these anomalies non-surgically.<sup>5</sup> The delay incurred by referring to a plastic surgeon may result in a missed opportunity to treat these deformities.

### Conflict of interest

None.

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### References

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