Congenital depression of the neonatal skull: a self limiting condition

A term male infant weighing 3460 g was delivered by vacuum extraction for fetal distress to a healthy 30 year old primagravida. Antenatal course was uneventful, and the baby was delivered in good condition (Apgar scores 9 and 10 at one and five minutes). A right parietal skull depression was noted clinically, separate from the site of ventouse application. Neurological examination was normal. Computed tomography with three dimensional reconstruction images revealed a 4 × 4 cm depression in the right parietal bone (figs 1 and 2). There was no evidence of fracture, and the intracranial structures were normal. On review at 4 months of age, the depression had completely resolved. The baby remains neurologically intact and is thriving.

Neonatal skull depressions are extremely rare, with an incidence of about 1/10 000 in western countries.¹ The cause is usually unknown, but it has been suggested that, because of the cartilaginous nature of the fetal skull, compression by fetal limbs or maternal pelvis during delivery could result in skull deformation.²

Treatments advocated have included surgical elevation,^{3,4} elevation by digital pressure on the edges of the depression,⁵ elevation by vacuum extractor or a breast pump,⁶ and watchful waiting. Our report confirms the value of conservative treatment with spontaneous resolution within four months, and we recommend that management be conservative in all cases with no intracranial involvement. Surgical or vacuum elevation should be reserved for the unlikely event of lack of spontaneous resolution within six months. As computed tomography or magnetic resonance imaging would not affect management, these may not be necessary if such an approach were adopted.

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Figure 1 Axial computed tomography brain scan showing a depression in the right parietal region with no associated fracture.

Figure 2 Three dimensional reconstruction images of the computed tomography brain scan.

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