LEADING ARTICLE

SUBAPONEUROTIC HAEMORRHAGE REVISITED

K W Tan

SINGAPORE MED J 1990; Vol 31: 203

Subaponeurotic haemorrhage develops when blood collects in the loose areolar tissue in the space between the periosteum of the skull and the galea aponeurosis. Whilst other types of bleeding in the scalp are unlikely to affect the newborn seriously, haemorrhage under the galea aponeurosis can be serious in its severity.

The condition was given prominence by reports in the 1960's (1,2). It is rare and unusual after spontaneous vaginal delivery in Caucasian infants but not so rare in similarly born infants of African origin. This was thought to be related to an increased number of Vitamin K related coagulopathy in the latter infants (2).

Its incidence has increased considerably since the introduction of vacuum extraction in obstetric practice. Ahuja et al (3) found that 9 out of 232 infants on whom the vacuum extractor was employed developed subaponeurotic haemorrhage and 2 of these infants died. Plauche (4) in a review of the world literature found that subaponeurotic haemorrhage occurs in approximately 4 of 10,000 deliveries but that its incidence seems to be 15 times more (59/10,000) in centres where vacuum extraction is a major mode of instrumental delivery.

In a report by Boo in the current issue of the Singapore Medical Journal (5) the authors found an incidence of subaponeurotic haemorrhage in their maternity hospital of 1.6 per 1,000 live births of which the majority (66.3%) were associated with vacuum extraction. The incidence of subaponeurotic haemorrhage was considerably higher (41.4 per 1,000 deliveries versus 1.0 per 1,000 deliveries) when the mode of delivery was by vacuum extraction as compared to other modes of delivery. Vitamin K related coagulopathy was not a common problem in their babies.

Vacuum extraction has its advocates. It is said to be a safe method of delivery if certain principles are strictly adhered to (6, 7).

Nevertheless, the paper submitted by Boo (5) focuses again on the clear association between Subaponeurotic haemorrhage and Vacuum Extraction. 2 comments can be made :

(1) Most maternity and neonatal (perinatal) centres have regular mortality audits. Morbidity audits should perhaps also be instituted. The benefits are obvious.

(2) Whilst it would perhaps be inappropriate for Neonatal Paediatricians to pronounce on the merits or otherwise of delivery by vacuum extraction or indeed any other mode of delivery, it is indeed timely that such a problem that could easily be forgotten is again brought out into the light.

Department of Neonatal Medicine II
Kandang Kerbau Hospital
Hampshire Road
Singapore 0821

K W Tan, MBBS (Sydney), M Med (Paed) (S'pore)
Senior Consultant and Head

REFERENCES

1. Van de Horst R. Exsanguinating Cephalho-hematoma in African newborn infants. Arch Dis Child 1963; 38: 280-5.
2. Robinson RJ, Rossiter MA. Massive subaponeurotic haemorrhage in babies of African origin. Arch Dis Child 1968; 43: 684-7.
3. Ahuja GL, Willoughby MLN, Kerr MM, Hutchinson JH. Massive Subaponeurotic haemorrhage in infants born by Vacuum extraction. Br Med J 1969; 3: 743-5.
4. Plauche WC. Subgaleal hematoma. A complication of Instrumental Delivery. JAMA 1980; 244: 1597-8.
5. N Y Boo : Subaponeurotic Haemorrhage in Malaysian Neonates : Singapore Med J 1990; 31 : 207-10.
6. Bird G. The use of the vacuum extractor. Clin Obstet Gynaecol 1982; 9: 641-61.
7. Ngan HYS, Tang GWK, Ma HK. Vacuum Extractor: A safe instrument? Aust NZ J Obstet Gynaecol 1986; 26: 177-81.