

Neonatology—then and now

The Editors have asked Dr Colin HM Walker to write the next series of short historical articles for the Journal. Dr Walker has recently retired from his post as consultant paediatrician with a special interest in neonatology at Ninewells Hospital and Medical School, Dundee. His extensive contribution to the clinical care and research of the newborn will provide the perspective we seek. He has chosen subjects of current interest and looked back for articles on similar or related topics published in the Archives 20–30 years ago.

Bone injury—accidental or otherwise? (1958)

Traumatic subperiosteal haematoma of the femur in the newborn

ROSS G MITCHELL AND K RHANEY

University of St Andrews, Dundee (Arch Dis Child 1958;33:205–9)

Not many cases of this condition had thus far been reported and the authors present two, one of which provided the first necropsy description of this lesion.

The paper starts:

'The occurrence at birth of a subperiosteal haematoma without fracture was not widely recognized until attention was drawn to the condition by Snedecor, Knapp and Wilson (1935), who called it 'traumatic ossifying periostitis'. A few other reports of this type of birth injury were subsequently published under such titles as periosteal stripping (Burman and Langsam, 1939), neonatal contusion (Caffey, 1945) and ossifying haematoma (Brailsford, 1948) ...'

The history of traumatic (usually breech) delivery leads one to suspect this diagnosis though, as this paper indicates, there is an important and considerable differential diagnosis when the lesion is detected in the immediately postneonatal period. This includes the normal double contour of the long bones (most frequently seen in preterm infants), infantile cortical hyperostosis, osteomyelitis, and congenital syphilis, and if discovered somewhat later—sarcoma, scurvy, and hypervitaminosis A. Most of these are relatively easy to distinguish from neonatal subperiosteal haematoma by the age of onset and other clinical findings.

Today. The present day interest in this entity is, however, found at the end of the section on differential diagnosis where it states:

'...subperiosteal haematoma may follow comparatively minor trauma in postnatal life. ...'

It is not surprising that possible child abuse does

not appear as a differential diagnosis as these two cases were diagnosed very early and at the time this paper was published little had been written on this subject. Today, however, trauma, accidental or otherwise, would come readily to mind on the finding in early infancy of radiological evidence, new or old, of subperiosteal haemorrhage. As a manifestation of birth trauma this lesion, like so many other forms of birth injury, has virtually disappeared, especially where breech extraction is avoided by the ready recourse to caesarean section. Where such obstetric care is not readily available, however, the possibility of periosteal lesions resulting from birth trauma and being first detected in early infancy must remain in mind.

The diagnostic differentiation of trauma from osteogenesis imperfecta in one of its less dramatic forms is difficult and the several varieties of the latter were also not recognised in the 1950s. Old traumatic lesions cause diagnostic problems and it has been recorded that 12% of parents on a United Kingdom register of 773 children with osteogenesis imperfecta were accused of non-accidental injury.¹ The exact age of old lesions is not easy to determine—yet another reason for caution in assuming these constitute evidence of child abuse in early infancy.

Reference

- ¹ Paterson CR, McAllion SJ. Child abuse and osteogenesis imperfecta. *Br Med J* 1987;295:1561.

Ross G Mitchell, an Edinburgh graduate, assumed the Chair of Child Health in Aberdeen after a consultant appointment in Dundee. He returned to

the James Mackenzie Chair in Dundee in 1973 from which he retired in 1985. His abundant contributions to paediatric literature include reports on his earlier laboratory research, clinical practice, and author/editorships, notably the later additions of Ellis's *Disease in Infancy and Childhood* and his own *Child Health in the Community*. He still holds the position of chairman of the Mac Keith Press. His travels as consultant and speaker have taken him to all corners of the globe including Russia and Third World

countries. He has served on numerous local and national medical committees, notably as Dean of the Faculty (Dundee), chairman of the Paediatric Advisory Committee, Scottish Home and Health Department, and member of the General Medical Council.

Dr Ken Rhaney, a paediatric pathologist, pioneered much in the field of neonatal morbid anatomy and histology.

Technical editor's note

From January 1989 results and measurements in the *Archives of Disease in Childhood* will be given in SI units only. Would contributors please ensure that all results in manuscripts, tables, and figures submitted from now on are in SI units otherwise publication may be delayed. Exceptions to this are:

- (a) Blood pressure in mm Hg;
- (b) Ventilation pressure in cm H₂O;
- (c) Concentration of drugs;
- (d) Concentration of any substance where the molecular weight is not known accurately.

No old units or conversion factors should be submitted in manuscripts: conversion is the responsibility solely of the author.

British Paediatric Association

Annual meetings

At York University:
1989 April 11–14

At University of Warwick:
1990 April 3–6
1991 April 16–19
1992 April 7–10
1993 April 20–23 (provisional)
1994 April 12–15 (provisional)