

## Bilateral congenital radial neuropraxia: a case history

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Congenital neuropraxia of the radial nerve with wrist drop is rare. The author can recollect seeing three cases among an estimated 100,000 newborn infants. The case history of an infant with bilateral radial neuropraxia follows:

### CASE HISTORY

The mother was a 29 year old primigravid woman of small stature. Her amniotic membranes ruptured spontaneously at 23 weeks gestation. She continued to drain amniotic fluid until at 30 weeks she went into labour. Delivery was assisted with the aid of forceps. The baby, a boy, weighed 1.84 Kg and had an Apgar score of 9 at 1 minute. On examination he was normal apart from bilateral wrist drop (Fig 1), a rather squashed nose, a mild contracture of the left sternomastoid muscle and minor degree of talipes calcaneo-valgus of the right foot, all suggestive of prenatal compression. There was also evidence of pressure induration and sub-cutaneous fat necrosis over the outer surfaces of the upper arms (Fig 2a and 2b), and also to a much lesser extent over the inner aspects of the arms, as well as the lateral chest walls. Both wrists (and the right foot) were splinted in a neutral position (Fig 3). By the age of 2 months the wrist drop had gone as had the other minor deformities (Fig 4). He was last seen at follow-up at the age of 2 years. At that time, he was found to be a fine, alert and intelligent lad, weighing 11.2Kg, without any evidence of deformity. He had commenced walking at 15 months (Fig 5).

### COMMENTARY

The importance of the amniotic fluid in protecting the fetus from moulding deformations is well known<sup>(1)</sup>. A major cause of oligohydramnios is premature rupture of the membranes with continued drainage of fluid. In a survey of 4,784 consecutively born infants studied in 1960-61, there were 11 such cases. Ten of the 11 infants revealed congenital postural deformities after delivery. In all they shared 23 deformities such as talipes and congenital dislocation of the hip<sup>(2,3)</sup>.

The occurrence of localized areas of subcutaneous fat necrosis in newborn infants was first recorded by Gray in 1926<sup>(4)</sup>. It was recognised that these areas of 'traumatic fat necrosis were usually found over prominent areas exposed to pressure in-utero. In 1951 Lightwood drew attention to the association of such indurated lesions on the newborn arm with wrist drop due to radial nerve neuropraxia. He reported two

cases<sup>(5)</sup>. Browne and Burman described in 1958<sup>(6)</sup> another infant in which both arms were involved. Recovery is the rule as in the present case.

Other congenital neuropraxias that the writer has observed over the years have involved the facial, sciatic, and obturator nerves.



Figure 1  
Bilateral wrist drop at birth due to radial nerve neuropraxia



Figure 3  
Both wrists splinted in a neutral position on day 1  
(With parental permission)



Figure 2a



Figure 2b

Figures 2a and 2b. Lateral aspects of the right and left upper arms showing induration and sub-cutaneous fat necrosis at birth

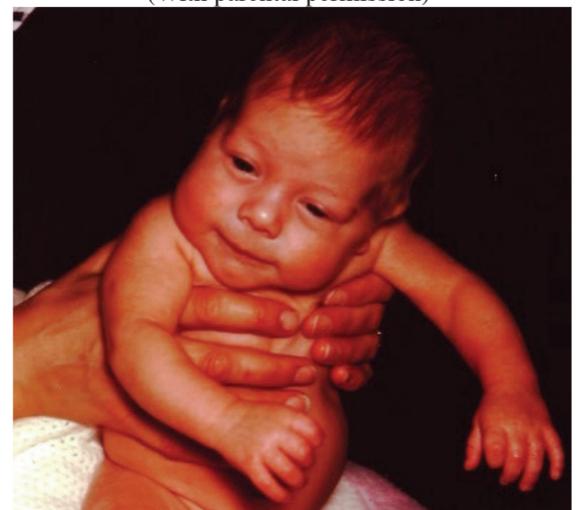


Figure 4  
Baby at two months without evidence of deformation or wrist drop  
(With parental permission)



Figure 5  
Aged 2 years. A normal healthy lad  
(With parental permission)

### REFERENCES

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