prolonged administration of a paralysing agent consistently resulted in limited deformities at the time of hatching.

The data cited above are used as supportive evidence for implicating pancuronium as a cause of joint contractures in one infant who received pancuronium for six hours and in a second infant who had been paralysed for 24 hours. The second infant had been noted to have joint contractures before the start of treatment. It would not be unreasonable to expect that prolonged use of muscle paralysis (as in the third case) could be associated with the development of contractures.

I am also confused as to exactly how the aminoglycoside or the fenobarbitone treatment increased the risk of contractures. If the authors are indeed worried about prolonging the action of pancuronium, neostigmine (and atropine) has been used for years to reverse paralysis.

In those infants requiring prolonged paralysis, physiotherapy may be justified to prevent contractures. The data presented, however, should not limit the use of muscle paralysis where appropriately indicated.

References


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A prospective study of chlamydial, mycoplasmal, and viral infections in a neonatal intensive care unit

Sir,

There is still much to be learnt about the microbiology of the newborn, and we were glad to see the article by Drs Rudd and Carrington.1 Our interest has been in respiratory syncytial virus infections in childhood, and in 1969 we studied an outbreak of neonatal infection in a maternity hospital in Newcastle upon Tyne.2 Knowing how severe illness from this virus can be in later infancy, we were surprised how mild it was in the neonate; no more than a ‘cold’.

Virus isolation is not an end but a beginning. We need to ask what is happening to the host in this encounter, what may happen in the future, and whether there is any connection between the two.

The mildness of neonatal respiratory syncytial virus infections can be deceptive; it may cause sudden unexplained (‘cot’) death.3 This is uncommon, but suggests the need for discreet oversight through the danger period. Apart from this, is mild neonatal infection unimportant? If it is not, how is it related to the severe epidemic ‘bronchiolitis’ and ‘pneumonia’ which may follow in the next six months;4 5 and to the excess of recurrent wheezing illness which occurs in the infected in the next five years? Have the authors uncovered any studies of neonatal respiratory syncytial virus infection followed into later childhood which can answer this?

Our attempt to find hard evidence has been prevented by inability to complete hospital experience with the full picture in the community from which the severe hospital illness is drawn. Without all the facts we can only speculate. Our hypothesis, which has not been disproved, is that mild first infection sensitises and leads to an allergic reaction expressed as ‘bronchiolitis’ which may go on from this to recurrent wheezing illness in the early years of childhood.6 7 At the same time our minds are not closed to the possibility that later severity reflects structural damage. Whichever interpretation is correct, mild respiratory syncytial virus infections in the newborn may set in train a pattern of severe and recurrent illness.

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Drs Rudd and Carrington comment:

It seems that not all neonates,4 and infants5 infected with respiratory syncytial virus develop severe illness. Factors which contribute to the severity of infection include preterm birth4 and the use of mechanical ventilation,5 and it may be that pre-existing bronchopulmonary dysplasia as well as transplacentally acquired immunity are important.

The relation between respiratory syncytial virus infection in the neonatal period and wheezing illness in childhood is of great interest, and there is an urgent need for prospective studies in this field. It would, however, be misleading to study respiratory syncytial virus in isolation. The symptoms produced by rhinovirus are indistinguishable from respiratory syncytial virus infection in the neonate. Chlamydia trachomatis, which produces pneumonia during the first few months of life, may go unrecognised and untreated. Ureaplasma urealyticum did not seem to cause illness in our study, although this organism has been isolated from infants with pneumonitis. Indeed, since publication of this work we have found that two babies with pneumonitis from whom only Mycoplasma hominis was isolated also produced an immune response to this organism. Thus, it may be that the wheezing illnesses of childhood result from the early sensitisation to a number of different microorganisms.

References

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D Court and H Steiner

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