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 phenobarbitone 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.

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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 learned 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'.[3]

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:[4] 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;[3 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 infants[8] infected with respiratory syncytial virus develop severe illness. Factors which contribute to the severity of infection include preterm birth[4] and the use of mechanical ventilation,[9] 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.[9] *Chlamydia trachomatis*, which produces pneumonitis 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 pneumonia 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.

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Tracing malformation syndromes with MEDLINE

Sir,

A recent annotation by Winter and Baraitser[1] reported their difficulties in finding recently published descriptions of malformation syndromes in *Index Medicus*. They went on to discuss the use of computers in recording and searching for combinations of abnormalities, but failed to mention the use of MEDLINE (the online version of *Index Medicus*) which is widely available and suitable for this purpose.

MEDLINE uses a fixed vocabulary of indexing headings—medical subject headings and subheadings. It also has the capability of searching for textwords or phrases in the titles of articles and in the author abstracts, and can be used to retrieve combinations of any or all of these elements.[2]

Many of the more common syndromes and malformations are available as medical subject headings: for example, *Down's syndrome*, *Fetal alcohol syndrome*, *Noonan syndrome*, and *Anus, imperforate*. Other syndromes are indexed as combinations of medical subject headings, for example, Williams-Campbell syndrome under the combination *Bronchiectasis+bronchi*/abnormalities+*Syndrome*. Many malformations are indexed under appropriate organ headings with the subheading 'abnormalities', for example, agenesis of the lung under *Lung*/abnormalities and polydactyly under *Fingers*/abnormalities or *Toes*/abnormalities, as appropriate. It is possible, however, to retrieve these concepts cleanly by the use of a combination of textwords and medical subject headings. For example, agenesis (textword) and *Lung*/abnormalities.

New syndromes showing combinations of abnormalities are indexed under appropriate combinations of medical subject headings for the major features of the syndrome discussed in the article, together with either the heading *Syndrome* (if mentioned as such) or *Abnormalities, multiple* as appropriate.

The hierarchical arrangement of medical subject headings into 'trees' enables one to search for whole categories of headings so that, for example, a combination of any congenital heart defect with any sex chromosome abnormality is easily done using the 'explode' facility. It is thus possible to search for any degree of 'loose' or 'tight' combinations as appropriate to the circumstances and to modify the search formulation in the light of the number of citations found in the course of searching at any time. Aspects such as methods of diagnosis, differential diagnosis, and forms of treatment are also indexed and can be retrieved if required.

MEDLINE is widely available in Britain from a number of hosts including BLAISE-LINK through university and hospital libraries. Those without direct access to an online terminal may wish to make use of the BLAISE-LINK Search Service at this address. I will be happy to supply further details on request.

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Membranous glomerulonephritis in Hong Kong

Sir,

Recently Wiggelinkhuizen *et al*[1] and Hus *et al*[2] reported the high incidence of membranous glomerulonephritis in children with nephrotic syndrome and its strong association with hepatitis B surface antigenaemia in South Africa and Taiwan respectively. Chan and Tsao in 1966 reported a similar high prevalence of membranous glomerulonephritis in Hong Kong children with nephrotic syndrome or persistent proteinuria, but the hepatititis B surface antigen status was not assessed.[3] We would like to report our recent experience in Hong Kong.

From January 1976 to June 1982, 43 Chinese children were admitted to this hospital with a diagnosis of idiopathic nephrotic syndrome. Patients with one or more of the following criteria underwent renal biopsy: steroid non-responsiveness; aged below 1 or over 8 years; presence of gross haematuria or hypertension; persistent azotaemia; frequent relapses; or persistent hypocomplementaemia. Thirty one of 43 patients were biopsied. Analysis of results showed that five had membranous glomerulonephritis, 16 minimal change nephropathy, five mesangial proliferative