

the relatively small number of Asian children with active tuberculosis. The further analysis of our data by Dr Vickers is valid, but does not detract from our conclusion that tuberculosis was more common in poor children than in Asian children.

Ribavirin in respiratory syncytial virus infection

Sir,

Over the winter of 1988, 10 infants with congenital heart disease were treated for severe bronchiolitis at Guy's Hospital. All required respiratory support of greater than 50% oxygen in a headbox, and seven required assisted ventilation. Seven patients were positive for respiratory syncytial virus, and seven received nebulised ribavirin for three to five days. There were four deaths, all infants with pre-existing pulmonary hypertension (see table).

Despite the early use of nebulised ribavirin, supervised by Brittanica Pharmaceuticals Ltd, some patients continued to deteriorate. Only three patients showed some improvement after ribavirin use. No patient improved when ribavirin was first used after ventilation had commenced. Indeed one child had an unexplained cardiorespiratory collapse on the ventilator shortly after starting ribavirin. We documented no other possible side effects.

We wish to emphasise the severity in Britain of respiratory syncytial virus bronchiolitis in infants with congenital heart disease. The high mortality in the presence of pulmonary hypertension confirms earlier American reports.¹ Our clinical impression was that ribavirin, started very early in the disease 'may' prevent some infants progressing to respiratory failure. The outcome was never one of dramatic clinical improvement.

The resource implications of widespread early use of ribavirin in all mildly symptomatic infants are very great however (approximately £600 for a three day course). We therefore strongly support the call for randomised controlled trials of ribavirin in bronchiolitic infants with cardiopulmonary disease.²

References

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Lung function and bronchial responsiveness measured by forced oscillometry after bronchopulmonary dysplasia

Sir,

We were interested to read the recent report by Duiverman *et al* on lung function in the long term survivors of bronchopulmonary dysplasia.¹ Their results differ from those of previous small studies and one large series² in that they failed to find an increase in airway responsiveness to inhaled histamine. Although differences in protocols and techniques used in these studies make direct comparison difficult, we feel that the main problem was technical rather than physiological.

The incidence of a positive airway response to pharmacological challenge depends on the arbitrary dose or concentration of the bronchoconstrictor agent used. By choosing a histamine dose as low as 1 μmol (325 μg), Duiverman and colleagues found very few responders both in the uncomplicated preterm survivors and in the group with bronchopulmonary dysplasia. At such a dose, only those who had a degree of airway responsiveness comparable with clinical asthma would be identified. One can only infer from their study that long term survivors of bronchopulmonary dysplasia were no more likely than other children of preterm birth to have a degree of airway

Table Clinical details of 10 infants studied

Case No	Congenital heart disease	Respiratory syncytial virus	Assisted ventilation given	Ribavirin given	Outcome
1	Total anomalous pulmonary venous drainage	+	Yes	Yes	Died
2	Patent ductus arteriosus	+	Yes	Yes	Alive
3	Double outlet right ventricle	+	Yes	Yes	Died
4	Total anomalous pulmonary venous drainage	+	No	Yes	Alive
5	Aortic stenosis, mitral incompetence	+	No	Yes	Alive
6	Ventricular septal defect	+	No	Yes	Alive
7	Pulmonary stenosis	+	Yes	No	Alive
8	Atrioventricular septal defect		Yes	Yes	Died
9	Ventricular septal defect		Yes	No	Alive
10	Ventricular septal defect		Yes	No	Died