Since the group was formed in 1985 the administration and organisation of the group has passed from one senior registrar to the next. The group has successfully promoted a wide interest in clinical research among junior staff.

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Impact of AIDS on neonatal care

Sir,

I greatly enjoyed Tom Lissauer's annotation on the impact of AIDS (does he mean HIV infection?) on neonatal care.[1] I beg to differ, however, on his conclusion that we should avoid the 'two tier' system of neonatal care. At delivery, where there is much blood and liquor and the potential for staff to become infected (although none have yet been shown to have been infected at delivery), the Royal College of Obstetricians and Gynaecologists have not unreasonably proposed a general improvement in standards of hygiene, and extra precautions for delivery of women who are HIV seropositive or from high risk groups.[2] Their proposals regarding precautions to be taken by paediatric staff at delivery also seem eminently reasonable.

The risk to staff of contracting HIV infection from a baby postnatally, however, is exceedingly low and there may be virtually no risk. To suggest that we should be wearing gloves and eye protection whenever we are taking blood or performing any invasive procedure on any newborn must be an over reaction. Why should the risk stop in the newborn period? The corollary is surely that we should wear gloves whenever we take blood from any child, or adult for that matter. Yet, as Dr Lissauer himself states, the major risk is of accidental autoinoculation with HIV positive blood against which gloves provide very little protection. In many hospitals in New York gloves are worn for all procedures as Dr Lissauer's statement implies. The annual gloves bill for one hospital in the Bronx is over 5 million dollars (A Mezey, personal communication). I think this is illogical, expensive, and off putting to parents and children. I believe staff with open lesions (cuts, eczema) should cover these with waterproof tape. I will wear gloves to take blood from babies and children I know to be, or suspect of being, HIV positive and try to avoid needle stick injuries at all times. But I will not wear gloves and eye protection to take blood from or handle other newborns or older children.

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Bradycardia associated with chlorhexidine spray

Sir,

We report a possible iatrogenic cause of bradycardia in a term neonate.

Case report

The girl was born by normal delivery after an uneventful antenatal period. Her Apgar scores were 9 and 10 at 1 and 5 minutes respectively. No medication was given during the labour. In order to prevent possible mastitis the mother used chlorhexidine spray on her breasts from the third feed when the baby was 12 hours old. Cyanotic spells associated with bradycardia (<40 per minute) but not with apnoea occurred from 48 hours. The heart rate was lowest during sleep but increased on stimulation. Multiple episodes occurred over the next 48 hours, and some needed treatment with atropine, to which they responded. An electrocardiogram confirmed sinus bradycardia. The chlorhexidine spray was stopped and the bradycardias became less frequent and less severe. By day six they had abated completely and follow up examination at five weeks was normal. Investigations including full blood count, urea and electrolytes, thyroid function tests, cardiac enzymes, and an echocardiogram were all normal. The serum chlorhexidine concentration at 120 hours was 11 pg/l. This was estimated when the spray had been stopped and the worst of the bradycardias had abated.

Adrenergic nerve damage, which was dose dependent but reversible, has been produced in rat irides after the local injection of as little as 0·25 μg of chlorhexidine.[1] The gastrointestinal absorption of chlorhexidine has not been studied in man but assumed to be low[2] despite studies showing significant absorption through the intact skin of newborn infants.[3] The dose of chlorhexidine in each spray is 430 μg. Over 24 hours (assuming six feeds) 2·5 mg is delivered to the breast and could be ingested by the baby. Studies on absorption of chlorhexidine from the gastrointestinal tract need to be conducted and awareness of possible side effects maintained.

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Measles immunisation in atopic eczema

Sir,

Last year a communication from the Department of Health and Social Security indicated that there was an upsurge of measles notifications in early 1988 and emphasised that allergy to hens' egg is no longer considered to be a contraindication to measles immunisation unless associated with an anaphylactoid reaction.[1] This specific contraindication also applies to the MMR vaccination.[2]

In 1984/1985 we performed a questionnaire study of all children with atopic eczema who had attended a dermatology clinic at the Hospital for Sick Children, Great Ormond Street, at any time in the previous four years. Questionnaires were also answered by non-eczematous controls matched for age and social class. There was an 82·7% response with 128 cases and 117 controls out of a total of 148 pairs of questionnaires. Measles immunisation had been withheld for inappropriate reasons from 28·9% of the eczematous children and 2·6% of controls.

Although this questionnaire response reflects attitudes among health professionals in the early 1980s it is our impression that a considerable number of atopic children, particularly those with atopic eczema and those with a vague and unsubstantiated history of egg allergy, are still inappropriately denied immunisation. Approximately 10% of children will experience atopic eczema at some stage in their childhood and there is evidence that this is increasing.[3] Uncertainty in the profession as to the contraindications to immunisation in this group may adversely affect the immunisation rate for the population as a whole. We welcome the latest attempts by the Department of Health and Social Security to clarify this issue.

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Neonatology—then and now (*C H M Walker*)

Monitoring blood oxygen (1957)

Blood oxygen studies in premature infants

PATRICIA M RUSSELL AND F P HUDSON

Walton Hospital and Department of Child Health, University of Liverpool (Arch Dis Child 1957;**32:**392–6)

In the early 1950s there was some debate as to whether the lower and variable oxygen *saturations* observed in premature babies were of importance and whether or not they required correction. The observation that the irregular (periodic) respirations of premature babies became regular when they were given oxygen was observed personally (CHMW) even in babies born at full term in the Mile High City of Denver, Colorado. The respiratory mechanisms of some of the latter apparently respond to the lower ambient partial pressures of oxygen at altitudes of 5000 feet just as do preterm babies at lower altitudes.

The purpose of this study was therefore to measure the effect of administering 55–60% oxygen to premature babies for one hour. The birth weights of these babies were not given but it is presumed that they were below 2500 g. While PO_2 'in the lung' (presumably alveolar air) was used in calculations of dissolved oxygen, arterial PO_2 could not be measured in small volumes of blood and all estimations in those days were in terms of percentage saturation and content in volumes percent. As might be expected increases in saturation (up to 105%) and content (up to 31 volumes %) were observed even with as little as 55–60% oxygen.