

HIV in childhood

HIV infection must be considered in unexplained illness in children

Although the overall incidence of HIV infection in Britain seems much lower than originally predicted, the virus is undoubtedly established in the general community. There is also no doubt that growth in prevalence is now linked directly to heterosexual transmission.¹ Inevitably then, family doctors and paediatricians will see an increasing number of cases of childhood AIDS in the coming years.

Despite the risks, couples with a partner known to be infected with HIV still opt for pregnancy. If the mother is infected her baby has a 15% chance of infection; the risk of vertical transmission is higher in developing countries.² The desire for a child despite all the problems associated with HIV infection is now so common in families with haemophilia that it has long since ceased to be remarkable. Couples brave enough to discuss intended conception with their doctors are advised to have unprotected intercourse only at the time of ovulation, measured either with a prediction test or by natural family planning techniques. At all other times abstention or protected sex is suggested to lessen fetal risk from infected semen. The size of this risk is unknown, but Semprini and colleagues have now reported a study of the influence on outcome of paternal HIV status (p 453).³ Among other factors they considered whether babies might be infected during birth if infected semen was present in the vagina. Their preliminary study suggests that such exposure does not increase risk.

There is good news too from a study by De Cock and colleagues (p 441).⁴ They examined the effect of infection with HIV-2, in contrast to HIV-1, on the survival of children in west Africa. Their finding that HIV-2 is less likely to be transmitted perinatally supports previous reports of a low rate of vertical transmission of this virus (C Rouzious *et al* and S T Sibailly *et al*, eighth international congress on AIDS/third sexually transmitted disease world congress, Amsterdam, 1992). In the study of De Cock and colleagues the survival rates among children of seronegative mothers and those of mothers infected with HIV-2 did not differ at nine years. The authors conclude that public health advice about the risk of perinatal transmission should now take account of the different risks associated with these different viruses.

That HIV infection should now be included as a differential diagnosis in any child presenting with unexplained severe illness, at least in areas of relatively high prevalence (such as parts of Edinburgh and London), is clear from a report by

Tasker and colleagues (p 462).⁵ The long period of asymptomatic infection between exposure and illness in a parent who is unaware of her infection may make the diagnosis in an infected infant especially difficult, and time may be lost in unnecessary investigation or inappropriate treatment. The most common indicator disease in children is *Pneumocystis carinii* pneumonia, which may present as acute respiratory distress. At times when the incidence of respiratory infection in the community is expected to rise anyway, the true diagnosis may be the last thing on the attending doctor's mind. After infection with respiratory syncytial virus has been excluded the doctor's usual next step is to prescribe antibiotics for one of the common pathogens.

Only after this course of action failed in the three cases reported on by Tasker and colleagues did the penny drop. Before the true diagnosis was made the three infants, all under the age of 6 months, needed intensive care with mechanical support. As a result of their experience the authors suggest that direct questioning, designed to elicit a possible history of HIV infection in either parent, should now be a routine part of the history when infants present with unexplained respiratory deterioration. The authors make the point that in the cases they describe at least one week in which specific treatment could have been beneficial was lost because the true diagnosis had not been made.

Given the fact that *P carinii* pneumonia is the predominant infection associated with AIDS, the European collaborative study looked at the question of when, and if, prophylactic treatment should be given to children born to mothers infected with HIV; it used the CD4 lymphocyte count as a predictor of symptomatic disease in the children of mothers infected with HIV (p 437).⁶ The study is especially pertinent because in the United States the Centers for Disease Control have already recommended that primary prophylaxis against *P carinii* pneumonia should be offered to all children with low CD4 counts born to infected mothers.

The European group points out that prophylaxis with trimethoprim-sulphamethoxazole has problems, and it questions the blunderbuss approach suggested by the Centers for Disease Control. In its prospective study, monitoring the CD4 count seemed of limited value in the decision whether to offer prophylaxis. The group rejects the alternative of giving prophylaxis to every child at risk because the cumulative incidence of *P carinii* pneumonia in its cohort was only 2% by the age of 6.

What messages do these reports have for paediatricians? Firstly, they need a high level of suspicion that HIV infection may underlie severe respiratory distress in infants. Secondly, they should be aware that careful follow up and early reporting of symptoms are better than a blanket reliance on prophylaxis against pneumonia in children who may have been infected perinatally. Thirdly, they need to know that different types of the human immunodeficiency retroviral family will act differently and that proper counselling will increasingly depend on laboratory findings in individual families.

Lastly, and perhaps most importantly, they need to appreciate that having a baby still ranks high in the lives of people blighted by HIV infection. More research is needed to help couples desiring pregnancy to achieve this with the lowest possible risk to the baby, despite the ominous long

term problems likely to be associated with the premature death of one or both parents.

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- 2 Newell M-L, Peckham C. Risk factors for vertical transmission of HIV-1 and early markers of HIV-1 infection in children. *AIDS* 1993;7 (suppl 1):S91-7.
- 3 Semprini AE, Ravizza M, Muggiasca ML, Giuntelli S, Fiore S, Pardi G. Paternal HIV infection and transfer of HIV from mother to fetus. *BMJ* 1994;308:453.
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- 5 Tasker RC, Wilkinson K, Slater TJ, Novelli V. Unsuspected *Pneumocystis carinii* pneumonia and vertically acquired HIV infection in infants requiring intensive care. *BMJ* 1994;308:462-3.
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Purchasers, professionals, and public health

A need for a more radical appraisal of roles

The Abrams report¹ offers updated (but interim) guidance, given the "urgent need to clarify the public health function" in the light of the reforms of the NHS that have occurred since the Acheson report.² It actually says little about the public health function and misses an ideal opportunity to further the cause of public health. It shows uncertainty about clinical advisory mechanisms, continues the tradition of professional territorialism, and reverses the current, welcome move towards a service focused on primary care. It also fails to address the tension between independent objectivity and managerial pragmatism, and it does not consider the best way of deploying public health specialists across the purchaser-provider split.

The NHS Management Executive has issued advice for purchasers requiring them to have a close involvement with general practitioners, constant dialogue with providers, shared medical advisory mechanisms, and access to clinical advice.³ The Abrams report suggests that it is the director of public health, as "the focus for a comprehensive public health strategy," who should fulfil such responsibilities. The effectiveness of such strategies, however, depends on an appropriate clinical contribution, and the report's proposals risk restricting purchasers in their choice of professional advice.

A survey of purchasing plans in London shows that most planned changes concern efficiency, with some affecting accessibility but few aiming to achieve more appropriate or effective care (H Patrick, personal communication). The missing link in commissioning is clinical policy. Contract managers are skilled in monitoring current provision, and consultants in public health medicine are skilled in assessing health needs, but there is little science in either determining the best way to meet those needs or assessing the effectiveness of any interventions.

What is needed are the broad skills and networks to determine standards and the appropriateness of clinical care and to promote service development and training. Such skills are not currently abundant in departments of public health medicine and might anyway be more usefully provided on a larger, aggregated basis, which would avoid any fragmentation of advice on public health. Such a broad and multidisciplinary vision of commissioning urgently requires an

appreciable shift in purchasers' thinking, a change that could not have been considered by a group as narrow in membership as the Abrams committee.

The members do not seem to have considered the impact on the NHS of doctors with experience of management and public health (as opposed to public health medicine) and that they might be well qualified to lead the development of clinical policy for a purchasing authority. There is certainly no sign that they considered the possibility that epidemiologically trained professionals without any medical qualifications might excel as directors of public health. Instead, members seem to have focused their energies on protecting professional boundaries; the complex guidance on the relationship between consultants in communicable disease control, consultants in infectious diseases, and chief environmental health officers seems to have more to do with securing roles for these professionals than with protecting society from virulent diseases.

Such professional tribalism may be contagious: in a consultation paper from their association primary care medical advisers suggested a formal qualification to accredit them for work as medical advisers.⁴ The lack of consultation with the Abrams committee, despite both disciplines working in public health, shows the vulnerability and short sightedness of both groups.

If collaboration had been sought, more innovative pathways might have emerged: the Acheson report recommended that training institutions should recognise that public health is broader than one group of individuals and that health authorities should consider making appointments that allowed the use of combined skills.² Such actions would begin to break down professional barriers and focus on the best skills for each function, an approach rejected by the Abrams report even as society at large begins to accept the notion of qualifications based on skill.

This is particularly important in primary care, where the culture is quite unlike that in hospitals. Problems are more diverse, organisations more fragmented, and management tools more subtle. Here, in particular, the skills of the multidisciplinary team are at their strongest and those of the director of public health most in need of augmentation. Conversely, it is there that public health medicine has its