Why screen for HIV infection in pregnancy?

As increasing numbers of women are at risk of HIV infection from heterosexual transmission, the Department of Health has encouraged named voluntary HIV testing for women in pregnancy, in areas of high prevalence.[1] One method of determining the success of a screening programme is to assess the levels of uptake, as Holland *et al* have done (see page 176). However, it is also important to qualify the advantages and disadvantages of the diagnosis of infection for an individual woman. This is difficult owing to the limited information available at present.

If a pregnant woman is found to be infected, she could have a termination of pregnancy. It has been suggested that the diagnosis of HIV infection during pregnancy has little influence on the decision to terminate the pregnancy.[2] From the limited information available, there is no evidence that pregnancy accelerates the progression of disease in asymptomatic women.[3]

In Europe mother to child transmission of HIV occurs in about 15–20% of cases, compared with about 25–30% of cases in Africa.[4] Transmission can occur before, during, or after delivery, though the relative contribution of each of these routes has not been measured. Mothers with advanced HIV disease have a considerably increased risk of transmitting the infection. Delivery by caesarean section may reduce the rate of vertical transmission by 20–50%,[5,6] though only randomised trials can measure this reduction precisely. In a woman with established HIV infection, breast feeding approximately doubles the risk of transmission.[4] Preliminary results from an American–French trial of antiretroviral treatment with zidovudine during pregnancy, labour, and in the neonatal period showed a two thirds reduction (from 25·5% to 8·3%) in the risk of infection for the infant.[7] There is, however, no information about the possible long term effect of zidovudine treatment on the child, and about 80% are not infected anyway. Information is needed about the effect of temporary zidovudine treatment in the asymptomatic phase of infection on the subsequent clinical management of the woman. The best method and timing of therapeutic interventions have not yet been established.

About one quarter of infected children develop AIDS in the first year of life, and about 15% die owing to HIV related manifestations.[8] Progression is less rapid thereafter, and by 5 years of age about 70% of infected children are still alive, many without serious HIV related symptoms.

If HIV screening in general is worthwhile – and this has not been clearly shown – then screening in pregnancy would offer the opportunity to treat the mother and, where necessary, the infant, and so improve their prognosis. Various interventions, including prophylaxis against, and early treatment of opportunistic infection, and antiretroviral treatment after the onset of symptoms to delay progression of the disease have been used in the treatment of individuals with HIV infection.[9] Unfortunately, still too little is known about the effects of such interventions on mortality or the quality of life.[10]

Whatever the benefits of screening, there are a number of disadvantages – namely, stigmatisation, discrimination, and loss of confidentiality. There are few data available to quantify the frequency and extent of these adverse effects. The challenge is to educate the public to prevent them occurring.

Though much is still unknown, there are benefits of screening in pregnancy – notably, avoiding breast feeding, which in other circumstances would be strongly recommended. On balance, the advantages of antenatal testing increasingly outweigh the disadvantages, both for the woman and her child.

MARIE-LOUISE NEWELL
Lecturer in Epidemiology
Coordinator European
Collaborative Study
Department of Paediatric Epidemiology,
Institute of Child Health,
30 Guilford Street,
London WC1N 1EH
United Kingdom

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