

influenced the estimates of changes in incidence and mortality, although the systems used operated in the same way throughout the years studied.

The decline in incidence of myocardial infarction among men was seen over only two years, and it is too early to draw conclusions regarding the long term trend. If the decline continues, however, possible explanations should be investigated. Future data may indicate a turning point in the mortality from myocardial infarction in Stockholm and Sweden in general.

- 1 Piza Z, Uemura K. Trends of mortality from ischaemic heart disease and other cardiovascular diseases in 27 countries 1968-77. *World Health Stat Q* 1982;35:11-36.
- 2 Alfredsson L, Ahlbom A. Increasing incidence and mortality from myocardial infarction in Stockholm county. *Br Med J* 1983;286:1931-3.
- 3 Welin L, Larsson B, Svärdsud K, Wilhelmsen L, Tibblin G. Why is the incidence of ischaemic heart disease increasing? Study of men born 1913 and 1923. *Lancet* 1983;ii:1087-8.
- 4 Ahlbom A. Acute myocardial infarction in Stockholm—a medical information system as an epidemiological tool. *Int J Epidemiol* 1978;7:271-6.
- 5 Breslow NW, Day NE. Indirect standardization and multiplicative models for rates, with reference to the age adjustment of cancer incidence and relative frequency data. *J Chronic Dis* 1975;28:289-303.

(Accepted 20 November 1986)

National Institute of Environmental Medicine, Box 60208, S-104 01 Stockholm, Sweden

NIKLAS HAMMAR, BA, research assistant
ANDERS AHLBOM, PHD, professor

Correspondence to: Mr Hammar.

HIV infection and AIDS in newborn babies of mothers positive for HIV antibody

Two thirds of the reported cases of the acquired immune deficiency syndrome (AIDS) in children have no risk factor except a mother belonging to a group with an increased prevalence of infection with human immunodeficiency virus (HIV).¹ There is evidence of transplacental passage of the virus during early and late gestation,^{2,3} but the incidence of fetal and neonatal infection in newborn babies of seropositive mothers has not yet been determined. We present the clinical and serological outcome of 24 babies aged 6 months born to mothers who were drug addicts and positive for HIV antibodies.

Patients, methods, and results

In 1985, 31 pregnant intravenous drug abusers at the Center for Pregnant Drug Addicts of Milano, Italy, were identified as being positive for HIV antibodies by enzyme linked immunosorbent assay and Western blot analysis at the first obstetrical visit and confirmed again before delivery. All patients were followed up and delivered at this department.

All the women were clinically well except for one, who had generalised lymphadenopathy, fewer than 400 T4 lymphocytes/mm³, and a low T4/T8 lymphocyte ratio. Nine women were primigravidae; 15 were secundigravidae, but only three were parous, reflecting a high incidence of elective abortions. All the pregnancies were singleton, 18 women being delivered vaginally and six by caesarean section (two babies in breech position, four suffering from intrapartum distress). All the babies were in good condition at birth with no malformations. The prevalence of premature delivery, fetal growth retardation, and early neonatal disease was comparable to that in the pregnant seronegative drug addicts. None of the babies was breast fed.

We obtained informed consent from the parents to follow up their babies. Clinical evaluations were performed at intervals of one month, and serological screening (enzyme linked immunosorbent assay and white blood cell count) and counts of T4 and T8 lymphocytes were performed on cord blood and at intervals of three months. At 6 months 12 babies were seropositive and 12 seronegative

Serological state of 24 babies at 6 months born to intravenous drug addicts positive for HIV antibody

Delivery	No of babies	Seropositive	Seronegative
Vaginal	18	9*	9
Caesarean	6	3	3
Total	24	12	12

*Died at 4 months from *Pneumocystis carinii* pneumonia.

(table). One seropositive baby died of *Pneumocystis carinii* pneumonia at 4 months, and one seropositive baby was diagnosed as suffering from AIDS related complex at the age of 3 months. All the other babies thrived, the results of their follow up being entirely normal.

Comment

Our limited study shows that the prevalence of seropositivity in children aged 6 months, when all the maternal antibodies should have disappeared, is 50%. Caesarean section does not seem to protect the fetus from infection, as has been suggested by one author and later refuted by the Center for Disease Control.⁴ This is consistent with the discovery of the virus in the fetal compartment in cases of elective caesarean section at 20 and 36 weeks.^{2,3}

The two cases of immune deficiency acquired by maternal transmission of the virus indicate that early morbidity and mortality are a severe problem, but their incidence seems to be restricted to about 10% of the offspring. Unfortunately, nothing can yet be said about long term morbidity and mortality. These data may be helpful in counselling seropositive women before or in early gestation, as they suggest that the risk of fetal infection and severe postnatal morbidity is high. Unfavourable perinatal outcome, usually associated with drug addiction, was similar in seropositive and seronegative women: a detrimental effect of the virus in this regard was thus not evident.

Constant updating of available data will allow better counselling, more appropriate obstetrical care, prenatal diagnosis, and prompt treatment when effective treatment is available.

The Center for Pregnant Drug Addicts of Milano comprises Carmen Brescianini, Anna Bucceri, Anna Canestrari, Gabriele Ferraris, Isa Lodi, and Marina Ravizza.

- 1 Center for Disease Control. Recommendation for assisting in the prevention of perinatal transmission of human T-lymphotrophic virus type-III/lymphodanopathy associated virus and acquired immunodeficiency syndrome. *MMWR* 1985;34:48.
- 2 Joviasias E, Koch MA, Schaefer A, Stauber M, Loewental D. LAV/HTLV-III in 20-week fetus. *Lancet* 1985;ii:1129.
- 3 Lapointe N, Michaud J, Pekovic D, Chausseau JP, Dupuy JM. Transplacental transmission of HTLV-III virus. *N Engl J Med* 1985;312:1325-6.
- 4 Lifson AR, Rogers MF. Vertical transmission of human immunodeficiency virus. *Lancet* 1986;ii:337.

(Accepted 4 November 1986)

Department of Obstetrics and Gynecology, University of Milano

AUGUSTO E SEMPRINI, MD, senior research investigator of the National Research Council
ALESSANDRA VUCETICH, MD, resident
GIORGIO PARDI, MD, professor

Immunoematology Unit, Istituti Clinici di Perfezionamento, Milano

MARIA MATILDE COSSU, MD, clinical assistant

Correspondence to: Dr A E Semprini, Clinica Mangiagalli, Via Commenda 12, 20122 Milano, Italy.

Fall in intraocular pressure during acute hypoglycaemia in patients with insulin dependent diabetes

In early studies of insulin induced hypoglycaemia in diabetic patients the development of "intraocular hypotonia" was noted¹; the occurrence of a sudden decrease in intraocular pressure during severe, uncontrolled hypoglycaemia was later confirmed in five patients with insulin dependent diabetes of varying duration.² To examine the magnitude of this decrease and its temporal relation to autonomic activation we measured intraocular pressure during controlled insulin induced hypoglycaemia in a group of insulin dependent diabetics.

Patients, methods, and results

As part of their diabetic education we exposed 12 insulin dependent diabetic patients aged 20-38 to a controlled episode of insulin induced hypoglycaemia with their informed consent. All patients were studied within one month after the diagnosis of diabetes; none had had metabolic decompensation at presentation. Satisfactory glycaemic control was established with a combination of short and intermediate acting human insulins given twice daily. None of the patients had diabetic retinopathy or had experienced blurring of vision after starting insulin treatment. Standard tests of cardiovascular reflexes gave normal results.

The patients were studied supine after an overnight fast, soluble human insulin