New device reduces mortality rate for newborns



Dr. Manning examines newborn after intrauterine surgery.

A team of Winnipeg, Manitoba doctors is earning an international reputation for its success in preventing infant deaths during or just after birth.

Using a unique ultrasound evaluation and amniocentesis screening process pioneered in Manitoba, the doctors have been instrumental in reducing the province's infant mortality rate to 1.3 per cent of babies born — one of the lowest rates in the world.

Dr. Frank Manning, head of a team of perinatal specialists, said "we've made a quantum leap in terms of screening highrisk pregnancies and preventing infant deaths", adding that medical experts across the world are now studying the Manitoba program.

Successful transfusions

Recently, Dr. Manning and his team combined skills with Dr. John Bowman, a world leader in treatment and prevention of Rh disease, to successfully complete intrauterine blood transfusions on twins with Rh factor disease.

A boy and girl were born at the Winnipeg Health Sciences Centre to Brazilian parents Marie and Paul Sakai. The mother underwent eight intrauterine blood transfusions over a period of three months, leading to a successful delivery.

A hospital spokesman said the babies were the second known twin survivors of the lengthy and delicate process of completely changing the blood type of the fetus while still in the womb.

Rh disease is caused when the mother, whose blood type does not carry the Rh factor, gives birth to children whose

blood carries the factor. The blood types are incompatible and could lead to a build-up of antibodies that would threaten the life of a fetus. The solution is to change the blood type of the fetus to match the mother's.

The intrauterine blood transfusion procedure was not new to the Winnipeg doctors. Patients from across the country and throughout the world are referred to them and they have done hundreds of transfusions over the past several years.

By using sophisticated, high-resolution ultrasound scanning, the doctors are able to monitor the path of the needle through the wall of the uterus and into the abdomen of the fetus. Before ultrasound, the procedure was done "blind" and presented a much greater risk to mother and fetus.

Detects abnormal fetuses

Dr. Manning and his associates, Dr. Ian Morrison, Dr. Ian Lange and Dr. Chris Harman, have used the same method to identify and treat fetuses with abdominal and bladder obstructions.

"Ultrasound equipment is so advanced you can see all the bits and pieces ... there's very little you can't discover about the baby after screening," said Dr. Manning.

In one six-week period, the screening program discovered two fetuses that had developed fluid on their lungs. Specialists were alerted and at the time of delivery, needles were used to remove the fluid and save the lives of the babies.

The Manitoba program is thought to be the first in the world to use a complete

screening concept in monitoring the infant in the mother's womb, employing ultrasound and amniocentesis, a procedure which draws amniotic fluid from the uterus for analysis to determine the medical condition of the fetus.

The screening procedure is fast and safe and if the fetus is normal the mother is sent home to await a normal delivery.

Infant death rate reduced

Provincial medical care officials point to the program as a significant factor in helping to reduce the province's infant death rate to 13.3 per 1 000 births of infants who weigh over 500 grams, a 46 per cent decrease in the death rate since 1977. Alarmed by the 1977 figures, the University of Manitoba set up a division of maternal and fetal medicine to find ways to reduce infant deaths. It lured Dr. Manning, a Manitoba native, away from his ultrasound research work in Los Angeles, to head the program. The screening program was set up at the Women's Hospital of the Health Sciences Centre and at St. Boniface General Hospital.

Assistance to Chad

Canada will give \$345 000 to the Office of the United Nations Disaster Relief Co-ordinator (UNDRO) in response to their appeal for relief for victims of drought and conflict in Chad.

The funds will be provided through the international humanitarian assistance program of the Canadian International Development Agency (CIDA).

Three years of uninterrupted drought and civil disturbance in Chad have reduced local output of basic food cereals. This has resulted in critical food shortages, likely to worsen later in the season. In addition, distribution of food supplies has been hampered by lack of vehicles. A recent UN mission has concluded that up to 200 trucks are needed to move food before the rainy season, beginning in May and June.

Canada's contribution of \$345 000 will be channelled toward the purchase of the needed trucks. This brings to \$895 000 Canada's contribution to Chadian relief programs in 1982-83. In June 1982, \$500 000 was given to the UNDRO for transport of emergency supplies, and in November 1982, Canada granted \$50 000 to the League of Red Cross Societies (LRCS) for medical assistance to the affected population.