Sudden intrauterine death

Foetuses of diabetic mothers are prone to sudden, unexplained intrauterine death (IUD) and this is related to the degree of glycaemic control. The incidence of IUD is highest after 36 weeks’ gestation and is more commonly found in macrosomic babies.13 It may be tempting to deliver these babies prematurely in order to avoid this eventuality. While this may be beneficial to both the mother and the foetus because glycaemic control may be enhanced in the mother and the foetus may be removed from an unfavourable environment, the principle of beneficence to both the mother and the foetus may be negated by the harm that early delivery may bring to the newborn baby. The baby may need to have assisted ventilation in a neonatal intensive care unit, which is not the best place for a premature baby because of potential nosocomial infection. In addition, beds in neonatal intensive care units are a scarce resource, which should be allocated to the most needy.14

Diabetic ketoacidosis

Diabetes accounts for approximately 3 to 5% of all maternal mortality, and approximately 15% of deaths are secondary to diabetic ketoacidosis (DKA).15 DKA may be precipitated by hyperemesis gravidarum, infection, tocolytic therapy with β-sympathomimetics and corticosteroid therapy. Deterioration and development of DKA may also result from autonomic neuropathy and gastro-paresis.16 Even though the risk of maternal death from an episode of DKA is now less than 1% with prompt recognition and treatment, the foetus does not fare well.17 In spite of aggressive treatment of the mother and improvements in neonatal care, studies suggest a 10 to 25% rate of foetal loss for a single episode of DKA.18,19

Ethical dilemmas arise when the mother is in a coma following an episode of DKA. The pregnancy may have to be terminated in maternal interest and in order to give the foetus a chance of survival at a time when the mother is not in a position to give informed consent. This act of beneficence to both the mother and baby could be viewed as unethical on two fronts: the foetus may have suffered irreversible damage and the mother may also be in an irreversibly comatose state such that an act of beneficence to both mother and baby may not be beneficial to either of the parties. Should the healthcare worker not do anything in anticipation of an unfavourable outcome to the mother and the baby, this may also create a dilemma.

A brain-dead mother with a premature, viable foetus may also pose an ethical dilemma. The mother may have to be kept in an intensive care unit until the baby can be delivered at a reasonable gestational age. This has ethical implications in that a decision needs to be made on allocation of scarce resources, and a multidisciplinary team comprising an obstetrician, a neonatologist and an intensivist should take a decision such as this.

Diabetic retinopathy

There is a two-fold increase in progression of diabetic retinopathy during pregnancy, and women with diabetes may develop retinopathy for the first time during pregnancy. The worsening retinopathy is often related to the rapid improvement in glycaemic control, which is a feature of early pregnancy, and to the increase in retinal blood flow. The risk is increased with poor metabolic control, diastolic hypertension, renal disease, anaemia and the severity of baseline retinopathy.20

Conclusion

Healthcare professionals who treat pregnant women have a fiduciary duty and an ethical obligation to prevent the adverse effects of maternal disease on the foetus, and to prevent worsening of the disease or the development of complications in the mother. In managing women in this situation, healthcare professionals frequently apply the ethical principles of autonomy, beneficence and non-maleficence. Where premature delivery becomes imperative, as in life-threatening complications in the mother, the principle of justice and fairness of the allocation of scarce resources should be applied, and autonomy supersedes all other ethical principles, provided the woman has been given sufficient information to enable her to make a decision of her own free will.

References