Learning Portal Lite: **Pregnancy**

This is a one-page summary; see the full version online

Potential harm

The incidence of major congenital malformations in the UK general population is estimated to be between 2-3%. A high proportion of these are of unknown aetiology; only 1-2% are thought to be due to drugs. The embryo is most vulnerable during the first trimester, when the cells differentiate and the major organs are formed, although there is the potential for harm from medicines when taken throughout pregnancy. The risk of teratogenicity increases with dose and number of medicines taken. Other adverse pregnancy outcomes include spontaneous abortion (miscarriage) and intra-uterine growth retardation. Most drugs cross the placenta, mainly by simple diffusion. Molecular size, degree of ionisation, protein binding and lipid solubility determine the extent to which they cross.

Reducing risk

Consider using non-drug treatments if appropriate. If drug treatment is required avoid known human teratogens, and consider whether treatment can be delayed until after the first trimester, or if there are other specific windows of risk. Use the lowest effective dose for the shortest time. Older drugs are often preferred.

Other considerations

As well as potential harm to the fetus, remember that drug pharmacokinetics can change in pregnancy. Plasma volume and renal function increase, and serum albumin concentrations decrease affecting drug distribution, and elimination. Drug metabolism may also be altered.

Talking to patients

Women should be offered a careful, tailored explanation of the potential risks to the child and the likely benefits of treating the maternal condition in language she can understand. A helpful framework to follow is to explain the potential consequences, how likely the woman and her unborn child are to be affected and what can be done to manage any risk(s).

Questions

If the woman is planning a pregnancy you will need information about the medicine (indication, dose, whether it is effective), the mother (any relevant obstetric history) and whether treatment is essential, could be delayed or whether a safer alternative could be used. For women who are already pregnant, you will need to establish the exact time period that the embryo/fetus has been exposed, and whether the plan is to continue with the medicine, stop the treatment or swap to a safer alternative.

Information sources

UKTIS, Medicines Q&As, specialist pregnancy text (Briggs, Schaefer), Embase, Medline.

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