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Adverse factors affecting embryo or fetus

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2.1 GENERAL INSTRUCTIONAL OBJECTIVE

The students should appreciate the pre-conceptual, antenatal and intrapartum factors that may adversely affect an embryo or fetus so that they can initiate the management of related problems.

2.2 SPECIFIC BEHAVIOURAL OBJECTIVES

1. Take a relevant history to reveal congenital and hereditary factors that may affect the fetus.
2. Discuss the adverse effects of exogenous hormones, drugs, irradiation and infectious conditions that may alter the physiological processes or cause abnormal development in a fetus or child.
3. Discuss the maternal factors that may be associated with inadequate fetal nutrition.
4. Discuss oxygen transfer to the fetus, those factors that may impair or interrupt it, and the effects of hypoxia on the fetus.
5. Discuss the examination, relevant investigations and findings, and their significance in relation to detecting abnormalities of fetal growth.
6. Discuss the initial management when either hypoxia or intrauterine growth retardation is identified by symptoms, signs or by investigations.
7. Explain how induction of labour, vaginal delivery or Caesarean section may adversely affect the fetus.
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8. Discuss those factors that contribute to cerebral damage and birth trauma.
9. Discuss the effects on the fetus of analgesics and anaesthetic agents used in labour.
10. Discuss those signs during pregnancy that may indicate fetal malformation.
11. Discuss perinatal mortality and identify the major factors contributing to perinatal mortality and morbidity.
12. Describe how a fetus may become infected in utero.
13. Discuss the effect of maternal trauma on the fetus.
14. Discuss the formation, constitution and significance of amniotic fluid.

2.3 REASONS FOR LEARNING TO APPRECIATE THE PRE-CONCEPTUAL, ANTENATAL AND INTRAPARTUM FACTORS THAT MAY ADVERSELY AFFECT AN EMBRYO OR FETUS IN UTERO

This chapter discusses the major reasons why the medical and paramedical professions should be involved in the care of couples who are either planning or expecting a further addition to their family unit.

A fetus may succumb to noxious influences in utero resulting in miscarriage or stillbirth, or a potentially healthy infant may die in labour or suffer significant morbidity which may affect the whole of his or her often shortened life.

Fortunately many of the causes of antenatal and postnatal morbidity and mortality can be predicted, or at least identified early, so that detrimental effects on the future child can be eliminated or alleviated by appropriate antenatal management. However, medical care itself is not without hazard: iatrogenic damage to the embryo, fetus or newborn must also be guarded against, as many of the procedures commonly used with the aim of improving the outcome of pregnancy may lead to increased perinatal mortality and morbidity if used inappropriately or on the basis of misleading information.

As most parents enter a pregnancy in good health, obstetrics is one medical speciality where prophylaxis should be the main aim. This, of course, is not possible unless the medical practitioner appreciates those factors that may adversely affect the fetus, knows how to investigate and identify those problems when they occur, and how to initiate the appropriate management of any such problem.

Perinatal deaths are regrettable, but perinatal morbidity may in