Fetal Medicine

Fetal growth and development

Edited by
Richard Harding and Alan D. Bocking

CAMBRIDGE UNIVERSITY PRESS
Organised by body-systems, the text examines the extent to which these systems enable the fetus to withstand adverse intrauterine conditions, and its ability to make the transition from intrauterine to extrauterine life. It is well recognised that disturbances to the materno-fetal environment during this transition can influence and even undermine the long-term health of an individual.
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FEATURES:
- Covers the latest concepts relating to the growth and development of the fetus
- Highlights the long-term influences and implications of the materno-fetal environment on the development of adult-onset diseases
- Provides a fascinating insight into the development of fetal body systems as they are primed to face the challenge of life outside the womb
- Deals with important issues relating to fetal development such as the formation of the embryo and the fundamentals of the placenta

Tables and flow diagrams summarize text

Fig. 1.1. Sequence of the major developmental events that occur during murine and human embryogenesis.

Fig. 2. 1. Data from various sources indicate that during normal fetal life outside the womb, the fetal heart (left ventricle) is right ventricle for the first 14 weeks, and then becomes left ventricle for the last 18 weeks. In the normal heart, oxygen saturation is entered in numbers. LV, left ventricle; RV, right ventricle; other arteries and veins are shown in blue. Oxygen saturation is entered in numbers. LV, left ventricle; RV, right ventricle; other arteries and veins are shown in blue.

Fig. 3. Development of the skeleton

Fig. 4. Scheme of the major processes of development in the embryo and the placenta.

Fig. 5.3. Development of the embryo.

Fig. 6. Histology of the two pathways of flow through the heart, the one (sinusoids) that remains almost entirely fetal throughout gestation and the other that provides an obligatory exchange of nutrient before the final transfer to the fetus.

Fig. 7. Hypothetical concept of fetal lung development and pulmonary differentiation in the lungs of the fetus. The factor present normally shown in vivo is absent in fetal life, thus explaining the difficulties in determining the factors for development of the lungs.
Written by world-renowned experts from leading centres of excellence, this is an invaluable textbook for students of medicine, reproductive biology and human biology. It will also serve as a good introduction to fetal medicine for trainees in materno-fetal and reproductive medicine and obstetrics and gynaecology.

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