Michael Chapman · Gedis Grudzinskas
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IMPLANTATION

Biological and Clinical Aspects

With 74 Figures

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Preface

The advent of assisted conception procedures such as in-vitro fertilisation (IVF) has provided the impetus for exploration of the factors that lead to the establishment of pregnancy. This collection of papers from leading research workers brings together current concepts of the processes which may be of importance in implantation.

The complex signals from the embryo to the ovary, endometrium and myometrium are now being revealed through studies in both primates and other mammalian species. This book addresses the interrelationship of pituitary and ovarian hormones in controlling ovulation and the preparation of the intrauterine environment for implantation. Once fertilisation has occurred and trophoblast has formed, the next vital step is the production of materials which signal the presence of the pregnancy to the rest of the body. Trophoblastic proteins and other early-pregnancy factors are prime candidates for this role.

Recent studies have emphasised the importance of the intrauterine environment in implantation. Specific secretory products of the endometrium have great potential in this process. The prostaglandins also play an essential part.

Immunological adjustments are now considered a condition for the successful establishment of pregnancy. The possible use of immunotherapy in the treatment of recurrent abortion has highlighted interest in this area. The use of immunological techniques for contraception are in their infancy but offer much hope for the future.

Clinical information on implantation failure and early pregnancy loss has grown rapidly with the intensive observation of pregnancies resulting from IVF, gamete intrafallopian transfer (GIFT) and other assisted fertility procedures. However, clinical intervention to improve the chances of success remains controversial.

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Michael Chapman
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