

New Trends in Reproductive Medicine

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K. H. Broer, I. Turanli (Eds.)

New Trends in Reproductive Medicine

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Foreword

H. M. BEIER

Reproductive medicine has emerged from the classical fields of gynecology, obstetrics, andrology, embryology, endocrinology, and genetics. It will therefore always be an area of collaborative effort and teamwork. The goals and strategies of the field of reproductive medicine have been established and clearly defined since the earth-shaking event of the birth of the first in vitro fertilized baby, Louise Brown, during the summer of 1978 at the Oldham District Hospital, near Manchester in England. This event demonstrated to everybody that success in reproductive medicine is truly the result of teamwork, in particular when the pathological obstacles are high and the efforts to overcome these difficulties need to be exceptionally intense. It was the evident collaboration of a basic researcher, Robert G. Edwards, and a gynecologist, Patrick Steptoe, which made those first efforts successful. There were a few essential and extremely busy helpers at each part of the team, nurses, physicians, lab endocrinologists, and technicians, not to forget the late Jean Purdy, who settled the laboratory conditions of what today is called an IVF lab.

Since those days of 1978, it has become an accepted fact in the world of gynecology and andrology that there will be never any progress in reproductive medicine if the lively and fruitful collaboration between clinician and basic researcher does not continue unabated. Such basic research is moving constantly and rapidly, and the progress in cell biology, molecular biology, and molecular genetics is very evident. The methodological spectrum of these fields is expanding in a fascinating manner. Today everyone understands what is meant by polymerase chain reaction, RNA blotting, in situ hybridization, gene targeting, cell transfection etc.

However, with these extraordinary methods and molecular skills, the field of reproductive medicine encounters

ethical battle fields in several regard. “*A child, my own baby by all means*”, “*A child is a joy at any age.*” Reproductive medicine has created the biggest challenge to its acting professionals by developing methods which seem to surpass nature. The availability of using donor ova with menopausal women as recipients launched the controversy surrounding not only reproduction per se but the age limitation of reproduction independent of the limits drawn by biological conditions.

Although the latest achievement of reproductive medicine, intracytoplasmic sperm injection (ICSI), was just a minor technical improvement of gamete micromanipulation, it was a major step towards overcoming some inevitable hurdles set by nature. The ongoing debate whether such major steps are legitimate advances in the field of reproductive medicine demands intense and critical assessments by the basic researcher, particularly the geneticist, and the clinician.

Any progress in reproductive medicine will only pase a serious achievement, either for an infertile couple or for mankind, if we all feel truly responsible for staying within the ethical framework of our profession.

This book may contribute to defining the goals and strategies of our exciting field. The authors are experts in their disciplines. Their experience and critical assessment may lead the specialists of tomorrow to what is generally agreed to be good medical practice, including responsibility and respect to the human beings most deeply involved in reproductive medicine, the patients.

Preface

K. H. BROER, I. TURANLI

Reproductive medicine is concerned with the problems of human reproduction, i.e., sterility and contraception, and is becoming increasingly important on an international scale. It becomes clear just how important this branch of medicine is if one considers that the world's population currently stands at around five billion and the percentage of childless couples who want children is relatively high; for the industrialized countries, it is estimated to be 10%–15%, while for the developing countries the figures vary greatly, ranging somewhere between 5% and 45%. It is this international significance which the authors aim to reflect in the present volume. Renowned scientists and clinicians who are internationally active in particular areas of reproductive medicine present the state of the art in their own fields.

The pace of development in reproductive medicine has been increasingly rapid in the past few years, and research results have swiftly been integrated into clinical practice. This process has by no means come to a standstill, but continues to develop fast and is in need of constant review.

Since the first success was achieved in *in vitro* fertilization and intratubal gamete transfer, the focus of attention has turned to ICSI microinsemination measures, which have opened up completely new areas of indication and decisively broadened the range of options available for treating sterility problems. In addition, the use of GnRH analogs and other established diagnostic and therapeutic procedures have led to a continual improvement in the overall concept of treating sterile couples.

The aim of this volume is to give clinicians and students a survey of current knowledge and the treatment options available in the field of reproductive medicine. The authors are aware that a complete overview would be impossible within the given framework of this book,

and thus have restricted themselves to focusing on important individual aspects, which range from research results to everyday clinical practice. The book is intended as a complementary volume to the up-to-date information provided by specialist congresses, seminars, and other single publications. The editors hope to broaden their readers' knowledge of the subject and to address aspects of treating sterile couples which can be adjusted to give individual attention to the problems of individual couples.