Diabetology of Pregnancy
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Preface

Diabetes mellitus has always been an active area of research. The complexity of the disease, its underlying pathogenetic mechanisms, progress in treatment strategies and recent insights into its potential and far-ranging complications have justified the establishment of diabetology as a medical and scientific specialty. In recent decades diabetes in pregnancy has evolved as a special subdiscipline. This book is published with the purpose of providing a comprehensive, but nevertheless concise, overview of the scientific and clinical characteristics/features of gestational diabetes as well as of type 1 and type 2 diabetes mellitus in pregnancy. It aims to address a wide range of specialists, health care professionals and academics, who are involved in tackling the medical and scientific problems of the disease and its influence on pregnancy and its outcome.

The ramifications of diabetes in pregnancy cover a broad range of areas and thus call for a multidisciplinary approach. Throughout this book the authors have tried to review published literature in this field on aspects such as etiology, physiology, molecular biology and genetics, immunology, pathogenesis, diagnosis, treatment and management, pathology and evidence-based medicine. In addition all the authors were encouraged to discuss their own observations and opinions.

Because of the population-dependent incidence and prevalence of diabetes in pregnancy the book begins with a chapter on its epidemiology. Two chapters deal with endocrine and metabolic changes in diabetic pregnancy, followed by a discussion on the role of leptin as the currently best-explored adipocyte hormone. Fuel-mediated functional teratogenesis and primary prevention introduce all
most recent aspects of the problem. Maternal influence on the embryonic
development was the logical introduction to the chapter on normal and abnor-
mal fetal growth, followed by discussions of nutritional effects on fetal
development.

A special characteristic of this book are three chapters on the placenta as a
fetal organ at the interface between mother and fetus. Its development, vasculo-
genesis and angiogenesis and morphological characteristics in diabetes as well
as its potential to provide a defense for the fetus are covered. Several illustra-
tions will aid the readers in understanding the complex information on the
sequences of developmental and pathologic alterations.

The aim of several chapters in this book was to survey current concepts of
the clinical management of the diabetic pregnancy including preconception
diagnosis and care, and provide protocols for pregnancy surveillance. The
recently introduced management of diabetic pregnancies with oral hypo-
glycemic agents is reviewed in a separate chapter. These articles were meant to
form a basis for discussion among the medical professionals about which
approach to choose.

The editors hope the reader will gain some profound insight into the com-
plexity of diabetes and pregnancy as well as potential pregnancy complications
during diabetic pregnancy and delivery. In order to cover the rapid progress that
has been made in recent years, especially in the basic sciences, this volume
would require additional chapters so as to include results in the field of genetics
and molecular biology as they relate to diabetes in pregnancy. However, space
limitations and the attempt to find a balance between a comprehensive and a
concise approach have resulted in the selection of the chapters included.

It has been a great honor for us to collaborate with so many worldwide
authorities in the field, several of whom had had the great opportunity to work
and discuss with distinguished pioneers in the field such as Norbert Freinkel,
Lars Molsted Pedersen, Lois Jovanovic and many others. Their particular exper-
tise and their enthusiasm have helped to cover all the major topics of impor-
tance in diabetology of pregnancy. Without their dedicated contribution this
project would not have been possible. Finally, the editors would like to thank the
efficient and encouraging staff at Karger Publishers, who actively participated
in our project.

Josip Djelmiš, Gernot Desoye, Marina Ivanišević
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