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PITUITARY TUMORS IN PREGNANCY

edited by

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PREFACE

Marcello D. Bronstein

Pituitary tumors, almost unvaryingly adenomas, account for 10% to 15% of intracranial neoplasms. The gonadotroph axis is frequently impaired in such tumors, either by the mass effect of macroadenomas or by abnormal secretion of other hormones, mainly prolactin, in both microadenomas and macroadenomas. Therefore, fertility is often compromised in patients harboring pituitary tumors.

The development of hormone therapy for ovulation induction, as well as surgical and drug therapies for restoration of abnormal hormonal levels, has turned pregnancy into a reality for women harboring pituitary adenomas. However, gestation risks for both mother and fetus became a concern for endocrinologists, gynecologists and pediatricians. This issue of Kluwer's Endocrine Updates intends to update knowledge on this topic, mainly regarding fertility restoration as well as gestational and post gestational management of patients with pituitary tumors.

The first three chapters deal with the hormonal physiology of normal pregnancy and aspects of the pharmacology of hormonally active drugs during gestation. Drs Morris and Braunstein describe how pregnancy influences normal pituitary morphology and function, giving important clues for the understanding of the effects of adenomas on pregnant women. Drs Freemark and Handwerger extensively discuss effects of somatogenic and lactogenic hormones on maternal metabolism and fetal development, important information considering that most secreting pituitary tumors produce prolactin and/or GH. Dr. Mortimer comprehensively reviews general aspects of the pharmacokinetics in the materno-fetal unit, and changes in pharmacology of replacement hormones during the gestation of hypopituitary women. Additionally the author focuses on safety aspects of drugs used for pituitary adenoma treatment during pregnancy.

Six chapters deal with clinical features of pituitary tumors. Dr. Musolino and myself address the issue of pregnancy and prolactinomas, the most prevalent pituitary-secreting adenomas. The literature is reviewed and new data presented concerning short and long-term follow-up of patients, newborns and children. Drs Herman-Bonert and Melmed, focusing on acromegaly, and Drs Madhun and Aron, dealing with Cushing’s disease,
provide important information on the difficulties of the biochemical diagnosis of these diseases in established pregnancies, as well as on the potential consequences of gestation on the tumors and the materno-fetal impact of active disease during pregnancy. Dr. Molitch addresses a topic seldom reported, induction of pregnancy in patients with clinically non-functioning adenomas, an heterogeneous group of pituitary tumors. Drs. Gillam and Molitch discuss an unusual disorder of the pituitary gland, lymphocytic hypophysitis, that often presents as a sellar mass and hypopituitarism. Its frequent association with pregnancy and postpartum periods justifies the inclusion of lymphocytic hypophysitis as a distinct chapter. Drs. Serafini, Motta and White take us through very didactic and practical description of ovulation induction in women with hypopituitarism, focusing on specific requirements for those harboring pituitary adenomas.

I would like to thank Dr. Shlomo Melmed, General Editor of the Endocrine Update Series for the kind invitation to edit this book. I am indebted to the contributors for their high quality contributions that uniformly encompass a topic still poorly dealt with in most textbooks. Finally, I wish to express my gratitude to Dr. Nina Musolino for her partnership in the chapter on prolactinomas, and also for her priceless assistance in preparing the final version of the chapters in a camera-ready format.