Book Reviews

Robert B. Greenblatt (ed.) Induction of Ovulation
Current Concepts in Obstetrics and Gynecology
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Induction of ovulation is a very interesting and important subject to all physicians who encounter patients with infertility due to anovulation. Ovulation in the human is the result of cyclic changes in the delicate balance of hormone production by the hypothalamus, pituitary and ovary. During the past decade much new information has been accrued as regards the complex physiologic changes which occur in the human ovulatory process. Such knowledge has been of inestimable value in the therapy of various clinical entities associated with anovulation but more especially in more than one third of infertile women.

The seven chapters in this volume are by well-known clinical scientists who require no introduction and, as a result, current thoughts on the etiology and treatment are presented in a lucid manner. The editor as usual demonstrates his magnificent literary style as well as his knowledge of Hebrew and biblical thought. In his preface he states that the old Hebrew injunction, ‘be fruitful and multiply’ is no longer of great importance in an overpopulated world but emphasizes that for many women in the Western World anovulation as a cause of infertility is still of major importance.

The contribution on anovulation underscores that a knowledge of normal hypothalamic-pituitary ovarian functions and feed-back mechanisms is a prerequisite for evaluating the etiology of this disorder. A simple classification of the etiology of anovulation is included which is accurate enough to enable the physician to evaluate and treat the patient. It also is of value in assessing the prognosis of therapy. The author concludes that it seems justified to conclude that today anovulation is a treatable disorder as far as infertility is concerned.

The chapter on gonadotropins emphasizes that no patient should receive such therapy without careful evaluation including a thorough infertility investigation. Hypogonadotropic states should be assessed for an intracranial lesion and if galactorrhea is present prolactin assays and polytomographic studies must be performed. It is germane to note that the dosage of gonadotropins administered and judicious use of urinary estrogen levels depend on the experience of the physician administering human menopausal gonadotropins. Attempts to produce the normal mid-cycle levels of estradiol does not achieve a maximal pregnancy rate and it is now generally accepted that higher estrogen levels must be attained. At the same time the physician must be cognizant of the fact that the difference in the amount of gonadotropins required for ovulation and the dosage which results in the hyperstimulation syndrome is minimal. The latter complication does not occur when human chorionic gonadotropin is not given. The hyperstimulation syndrome if not promptly recognized and
treated can be accompanied by thromboembolism. The diagnosis and management of the hyperstimulation syndrome are lucidly discussed and should be read by all who administer gonadotropins to women for the induction of ovulation.

The chapter on clomiphene citrate is a good review on the use of this drug in anovulatory women as is the contribution on gonadotropin-releasing hormone. It is of interest that in regard to the latter agent the writer indicates that it can be used to supplement the LH surge after clomiphene therapy in patients where clomiphene alone has failed to induce ovulation. Likewise, mention is made that when associated with human menopausal gonadotropin therapy the synthetic decapeptide may aid in the prevention of the hyperstimulation syndrome.

Although it is possible that prolactin is important in a wide spectrum of metabolic processes, only its role in the control of lactation and gonadal function have been firmly established in the human. Elevated prolactin levels are frequently observed in women with gonadal dysfunction. The causes of hyperprolactinemia and the use of bromocryptine are discussed in a concise manner in the erudite chapter on prolactin.

Other modalities for the induction of ovulation, such as antiestrogens, wedge resection of the ovaries and correction of psychophysical disorders are also discussed in this volume. The concluding contribution is a well-written dissertation on hormonal patterns and interrelationships during the ovulatory cycle.

The book is well-produced and the editor and his contributions have conceived a concise practical volume on the vagaries of the treatment of anovulation. It should be read by medical students, residents and physicians who have to deal with the infertile marriage.

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CM. Lingeman (ed.) Carcinogenic Hormones

Life is a changing process, and in solving its problems we are often deprived of fixed and quantifiable data. Furthermore, the adaptability of human tissues to circumstances involves numerous complex reactions so that all too often it is impossible to predict in quantitative terms the effect of any extraneous influence. The past decade has raised many queries as to the use and abuse of steroid preparations as well as their role in carcinogenesis. Consequently, this volume should have wide appeal because it addresses such subjects as the pathologic effects of oral contraceptives, hepatic neoplasms associated with contraceptive and anabolic steroids, and hormones in the etiology of cancer, in an erudite and provocative manner.

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In the area of reproductive endocrinology our comprehension of vital phenomena is being rapidly extended. The reactions of living tissues to steroidal agents have become an important issue, especially as sociologists and politicians consider that they can solve many of the problems of overpopulation by these compounds. The editor in the introductory chapter sums up the current dilemma pertaining to the use of estrogens and progestins in the following terms: ‘Agencies charged with control of the manufacture of these products and physicians who prescribe them are in particularly difficult situations, for there is a great public demand for “pills” to solve many problems, from overpopulation to protection from the supposed ravages of age. These demands are encouraged by ingenious members of the pharmaceutical industry who anticipate the needs, suggest additional ones, and design methods to manufacture new compounds.’
Studies of the interaction of estrogen and macromolecular receptors in the target tissue have permitted significant progress in our understanding of the nature of the protein receptors that are present in such responsive tissues as the uterus, vagina and breast. Androgen receptors have also been demonstrated in many tissues of the rat, but in addition, they can be present in neoplastic cells from human breast carcinoma. Hormone receptors as well as hormones in relation to cancer are well reviewed. Many will believe that progress has been slow but it should be remembered that long before the identification of estrone, the ovary was thought to be an agent in the development of mammary cancer. At the end of the last century, Beatson stated that, ‘We must look in the female to the ovaries as the seat of the exciting cause of carcinoma, certainly in the mamma, in all probability of the female organs generally.’ Although great strides have been made in understanding the biochemical characteristics of hormone-dependent breast cancer, the problem remains that existing methods of control are often transient and infrequently permanent, a fact that raises the important question of how a dependent tumor progresses into an autonomous neoplasm. The contributors to this volume emphasize that the development of effective hormonal control of hormone-related neoplasms depends on the understanding of the mechanism of action of hormones on normal cells and their neoplastic counterparts. The identification of estrogen-receptor protein in hormone-responsive, normal and neoplastic cells may offer one approach for designing compounds for effective therapy.

Further information is, however, required before one can determine the precise role of hormones and related compounds in carcinogenic processes in Homo sapiens. As is well recognized, it is essential that all individuals who receive steroidal agents should receive the lowest possible dose for the minimum time required to achieve the required clinical effect. Due emphasis is made on the fact that all individuals who are on steroid therapy should be under close medical supervision, not only during the time of administration, but for many years after discontinuing such therapy. In the chapter dealing with pathologic effects of oral contraceptives the authors recommend that a national registry should be formed to record and investigate the case histories of patients who die or have adverse reactions while taking the steroidal antifertility agents. Such a registry should be able to concentrate the data in one area, so that a comprehensive body of material would be available for the study of pathogenetic mechanisms.

The chapters dealing with mammary neoplasia, cancer and other lesions in mice receiving estrogens are timely and worthy of note. As stated in the summary on the chapter dealing with mammary neoplasia, one cannot extrapolate the findings in experimental animals directly to man; but in the absence of data on humans, animal studies must be used when it is necessary to make predictive judgements on factors that could influence the occurrence of disease entities in man.

Even at a casual glance one is impressed by this collection of papers, and further analysis of the information of the contributions confirms this favorable initial impression. Each chapter has a comprehensive bibliography which is conveniently located at the end of each chapter. This book should be made available to all who prescribe steroid hormones, and from it they will glean much food for thought.

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