

A TEXTBOOK
of
GYNECOLOGY

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CHIEFLY BY TOM JONES

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PREFACE TO THE FOURTH EDITION

MANY and important changes have been made in this edition. Pelvic and perineal anatomy have attained a much more well-rounded development. Improvements in cultivation of the gonococcus and introduction of the sulfa drugs in the therapy of gonorrheal disease have revolutionized the diagnostic and therapeutic procedures concerned with that affection to such an extent that the chapters on gonorrhea have been largely rewritten.

Much has been added to the pathology of uterine myomata. The chapter on carcinoma of the cervix has been elaborated, clarified, and simplified; considerable effort has been expended on the illustrations of the technic of the radical operation.

For the first time I feel that I have adequately expressed my views relative to the management of uterine displacements. The chapters on lacerations, cystocele, and prolapse have been rearranged and simplified; much effort has again been expended on the illustrations.

The section on ovarian tumors has been entirely redone and presents the most important addition to this volume.

Miss Mary Burdahl has worked with me throughout in the building of this book, as well as the preceding editions; she has been unceasing in her efforts to make our work a success.

Although noted elsewhere, I wish also here to express appreciation of the interest and help of Dr. Barry J. Anson in our pursuit of anatomy, and to Tom Jones for his artistic work and guidance. I am indebted to Dr. John W. Huffman for hours of work devoted to the photographs and photomicrographs, as well as friendly interest throughout.

The sustained interest of Dr. Irving S. Cutter, superintendent of Passavant Memorial Hospital and dean emeritus of Northwestern University Medical School, has been of material assistance, as in the preparation of previous editions.

I wish to express my deep appreciation of the excellent cooperation and exceptional courtesy of the W. B. Saunders Company.

CHICAGO, ILLINOIS.

ARTHUR HALE CURTIS.

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TEXTBOOK OF GYNECOLOGY

SECTION I

ANATOMY

CHAPTER 1

ANATOMY OF THE FEMALE PELVIS AND PERINEUM

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and

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PELVIS

THE pelvis, in the broadest meaning of the term, is the anatomical area bounded behind by the sacrum and the coccyx, and at the sides and in front by the innominate bones (Fig. 50). The whole region is divided into an upper part, the pelvis major (false pelvis²), and a lower part, the pelvis minor (true pelvis), by the margin of the linea terminalis (terminal line), which, curving downward and forward, consists on either side of the upper border of the first sacral vertebra, the arcuate line of the ileum, and the pectineal line of the pubis.

The *pelvis major* (false pelvis) is the expanded portion of the entire cavity above the linea terminalis (Figs. 49 and 50). Posteriorly it is deeply notched on each side between the ilium and the lumbar vertebrae; laterally it is bounded by the iliac fossae on the inner aspects of the alae; anteriorly, where the bony wall is deficient between the ilia, the boundary is furnished by the abdominal parietes.

The *pelvis minor* (true pelvis) is the contracted portion below and behind the linea terminalis. It may be divided into an inlet, bounded by

¹ The present account follows the general scheme of treatment in Chapter 1, by Barry J. Anson, in Volume I, Arthur H. Curtis' *Obstetrics and Gynecology* (W. B. Saunders, Philadelphia, 1933). The illustrations which accompanied the original account have been replaced by a series prepared by Tom Jones and Mary Dixon. The detailed anatomy of the subperitoneal connective tissue and ligamentous supports of the viscera, of the pelvic and urogenital diaphragms and of the vessels and nerves are adapted from the journal articles by the present authors and their associates dealing with these subjects (*Surgery, Gynecology and Obstetrics*, 1939, 68, 161; 1940, 70, 643; 1942, 74, 709; and other papers in press).

² The Latin form of the B. N. A. (*Basle Nomina Anatomica*) has been used in naming anatomical structures shown in the illustrations. In the text, however, the anglicized form has usually been employed.

the superior circumference, an outlet, limited by the inferior circumference, and a cavity. The superior circumference forms the brim of the pelvis and encloses the oval space termed the superior aperture, which corresponds to the plane of the superior strait. The circumference of the inlet is formed by those eminences, mentioned above, which divide the whole pelvis into two portions, namely, the anterior margin of the base of the sacrum behind, the arcuate and pectineal lines at the sides, and, in front, the continuation of the pectineal line of each half into the tubercle and the crest of the pubis. The inferior circumference forms the outlet of the pelvis, and is of very irregular outline. It includes the space called the inferior aperture, and lies in the plane of the inferior strait. It is bounded behind by the tip of the coccyx, at the sides by the ischial tuberosities, and in front by the pubic arch, which is formed by the inferior rami of the ischium and the pubis as these converge from either side toward the pubic symphysis. Between the ischial tuberosity anteriorly and the coccyx and sacrum posteriorly the bony wall of the pelvis is incomplete, and the deficiency assumes the form of a deep notch to either side of the middle line. This wide interval is bridged across, and partially filled, by the sacrospinous ligament (small or anterior sacrosciatic ligament) and the sacrotuberous ligament (great or posterior sacrosciatic ligament), which convert it into two foramina above and below the spine of the ischium, the greater and the lesser sciatic foramen, respectively (Fig. 48). The inferior margin of the sacrotuberous ligament thus assists in determining the shape of the pelvic outlet.

The cylindrical canal which ends above at the pelvic brim, or inlet, and below at the outlet is termed the *cavity of the pelvis*. This osseoligamentous space is clothed on its internal surface by a series of muscles and their investing fasciae, which considerably alter its form; on each lateral half these muscles are the piriformis and coccygeus posteriorly, the obturator internus laterally, and the levator ani inferiorly (Figs. 46 and 47; cf. 10 and 11). The levatores ani, together with the coccygei, constitute a musculo-aponeurotic partition called the *pelvic diaphragm*, which separates the space of the pelvis above from that of the perineum below. The pelvis contains the bladder, the rectum, and, between these, the generative organs, comprising the uterus, vagina, and uterine appendages. The perineum is traversed by the terminal portions of these three organ systems—the urinary, digestive, and genital—and their orifices open below upon its surface.

PERINEUM

The perineum is the anatomical region at the inferior end of the trunk between the thighs. It is, externally, a deep cleft when the thighs are approximated, but, when the latter are abducted, it becomes a broad lozenge-shaped area. Deeply it is limited in front by the pubic symphysis and the arcuate ligament, on each side by the inferior rami of the pubis and the ischium, the ischial tuberosity, and the sacrotuberous ligament, and

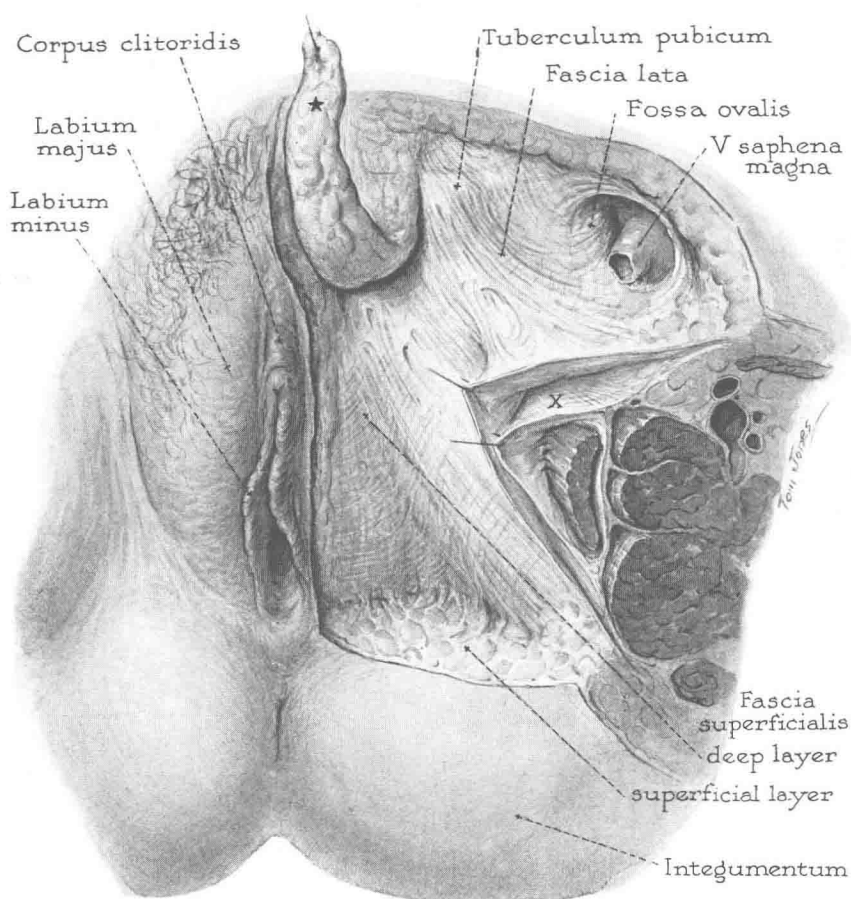


Fig. 1.—Female perineum. Subcutaneous layers; specimen I. On the (observer's) right side the superficial layer of the superficial fascia has been removed to expose the deep (Colles') layer in the anterior (urogenital) part of the perineum; in the posterior (anal) part of the perineum the superficial layer, locally thickened and adipose, remains intact behind the line of cut, *i.e.*, in the ischio-rectal fossa. The sleeve of fascia lata, shown by transecting the thigh, has been freed from the muscle fascia; the latter is shown as it invests the sartorius (at x) and the adductors, freed from the muscles and retracted. The diverticular process has been mobilized and lifted (marked with star). On the opposite half of the perineum the skin remains intact. Successfully deeper dissections of the same specimen follow (Figs. 2 to 4). (Curtis, Anson and Ashley in Surg., Gynec. and Obst., March, 1942.)

behind by the sacrum and the tip of the coccyx. On the surface (Fig. 1), it is bounded in front by the mons veneris, which rests upon the pubis, behind by the gluteal region (buttock), and at the sides by the femoral region