GYNAECOLOGY

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GYNAECOLOGY

By

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ANGUS AND ROBERTSON

SYDNEY · LONDON · MELBOURNE · WELLINGTON

First published 1939
Second, revised edition 1949
Third, revised edition 1955

SET IN LINOTYPE BASKERVILLE

PRINTED AND BOUND BY HALSTEAD PRESS, SYDNEY

REGISTERED IN AUSTRALIA FOR TRANSMISSION BY POST AS A BOOK

GYNAECOLOGY

PREFACE TO THE THIRD EDITION

NOTIFICATION by the publishers that the Second Edition was exhausted encouraged us to revise the text before issuing a third.

Many minor alterations and corrections have been made and a few additional diagrams inserted to clarify the text. The cancer tables have been brought up to date and our experiences with the use of antibiotics in hospital practice have been revised and modified.

We regret the sketchy nature of descriptions and the absence of accompanying diagrams in the chapter on operative procedures but the book is primarily meant for students and practitioners and not for the operating specialist. It would be impossible to do justice to this section without another volume being written.

We thank the reviewers of the Second Edition both local and oversea for their many helpful criticisms and suggestions for improvement.

HERBERT H. SCHLINK.

Craignish,
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March 1955.

PREFACE TO THE SECOND EDITION

WHEN the publishers suggested that a new edition of this text book should be undertaken the idea occurred to me that it would be a much more valuable book for the present generation of students and practitioners if I co-operated with the chiefs of the three gynaecological teaching units at the King George V Memorial Hospital for Mothers and Babies within the Royal Prince Alfred Hospital and standardized the teaching.

I therefore invited Mr Clement L. Chapman, who had been my first assistant for many years, together with Mr George L. Stening and Mr Frederick N. Chenhall, to collaborate with me.

The whole of the book has been reviewed, any accepted new principles in gynaecology since 1939 have been incorporated, and especial attention has been paid to the newer forms of treatment.

The chapters on anatomy, endocrinology, disorders of menstruation etc., have been rearranged and that on gynaecological urology has been enlarged. The chapter on endometriosis has been largely rewritten. The chapters on cancer, operative procedure and post-operative complications have been thoroughly revised, and a new chapter on virilism added.

I appreciate the permission of Wyeth Incorporated to use the drawings of Frank H. Netter, M.D., (Plates 7, 8, 9, 10 and 11) from their publication, *Pictorial Anatomy of the Lower Bowel.*

I wish to thank the reviewers, both local and oversea, of the first edition for their many helpful criticisms and suggestions for the book's improvement.

HERBERT H. SCHLINK

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August 1949.

PREFACE TO THE FIRST EDITION

THIS book is primarily intended for students about to present themselves for the final degree examination. It forms a background to the lectures and demonstrations given during the sixth year of the curriculum. Practitioners may also find it of service, since it deals systematically with the subject of gynaecology and records many of the routine forms of treatment adopted by the Sydney School.

It would be impossible to compile such a book without frequent reference to the many standard works on the subject and I here acknowledge my indebtedness to the text-books by the following authors: Berkeley and Bonney, Young, Fairbairn, Wilfred Shaw, Eden and Lockyer, Blair Bell, Stoeckel, Franz, Bumm, Schroeder, Peham and Amreich, Howard Kelly, Polak, Crossen, Graves, and others. I owe much to these writers and to many other authors of books and essays.

I wish to thank the editor of *The Medical Journal of Australia* for his courtesy in allowing the reproduction of illustrations that have appeared in that journal.

Any illustrations copied from the standard works or from other sources are acknowledged in the text. The microphotographs have been taken from our own operative material and I desire to thank Dr Geoffrey Davies, Pathologist to the Royal Prince Alfred Hospital, and his assistant for their help in this regard.

I am particularly indebted to my colleague, Mr Clement L. Chapman, for selecting the fields to be photographed, reading the manuscript, and for help in other respects.

Lastly, I should like to acknowledge my indebtedness to my early teachers, Mr Joseph Foreman, Mr Edward Thring, Mr Taylor Young and Mr Fourness Barrington.

HERBERT H. SCHLINK.

185 Macquarie Street,
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March 1939.

INTRODUCTION

THE subject of gynaecology deals with the diseases of the female genital organs and has both medical and surgical aspects.

The fact that the treatment of a section of these diseases falls within the province of operative surgery should not blind you to the important medical side of the subject.

As students it would be well for you to approach the subject of gynaecology from the point of view of the general practitioner rather than from that of an operating specialist. You should pay particular attention to the art of correct diagnosis, make yourself conversant with the pathology of the region and learn thoroughly the indications for the various types of treatment both medical and surgical. It will be quite time enough when you reach maturer years to concentrate on the technical side of operative procedure.

You are advised to take every opportunity of examining the recently removed specimens in the operating theatre and later to attend the demonstrations on the microscopic sections of these tissues. By so doing you will be able to correlate the clinical with the pathological aspect of your cases and gain a thorough knowledge of the subject.

Again, when you commence your practical work in the out-patients' department and gynaecological wards, I would ask you to pay particular regard to your conduct towards the patient. Remember that you are dealing with women and that the details of history taking and pelvic examination are of a most intimate nature. Always act in a dignified, sympathetic and gentle manner and you will be rewarded by the patient's gratitude and co-operation.

You should visit the patients allotted to you each day so as to become conversant with the course of the disease, its complications and treatment. Furthermore, you should learn thoroughly how to carry out the minor technical procedures, i.e. douching, tamponading, catheterization etc., too often considered to be solely the province of the nurses.

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CHAPTER I

ANATOMY

YOUR lectures in anatomy and the practical work in the dissecting room have already made you familiar with the female pelvis and its contents. However, a revision of the special anatomy of the female urogenital system will not be out of place before we commence the study of the diseases peculiar to women.

STRUCTURE OF THE PELVIS

The female pelvis is the bony girdle that receives the weight of the trunk and transmits it to the lower extremities, and at the same time serves to protect and support the pelvic viscera. Its detailed anatomy and measurements have been discussed fully in your lectures on midwifery, but we would ask you to recollect a few points about the pelvis as a whole:

1. The dried pelvis consists of two parts, which are divided by a ridge of bone known as the brim of the pelvis. The brim is formed by the upper margins of the pubic bones in front, the ilium at the sides, and the front of the promontory of the sacrum at the back. The portion of the pelvis above the brim is known as the false pelvis and that below the brim is called the true pelvis. Remember that the pelvic viscera, when normal, are contained within the latter.

2. The tilt of the pelvis as a whole in relation to the spinal column, expressed in degrees of the angle made by the plane of the brim with the lumbar vertebrae, has an important bearing on the position of the uterus as affected by intra-abdominal pressure.

3. The normal pelvis of a woman is shallower and wider than that of a man. The arch formed by the two pubic bones is also wider, and the measurements, both at the inlet of the true pelvis and at its outlet, are wider. The soft parts, and

especially the muscular structures, influence all the diameters of the true pelvis. At the brim the transverse diameter is narrowed by the psoas and iliacus muscles, and in the cavity the obturator internus muscles narrow the oblique diameters. Particularly at the outlet, the levatores ani, coccygeal, perineal and superficial muscles crowd on the available space.

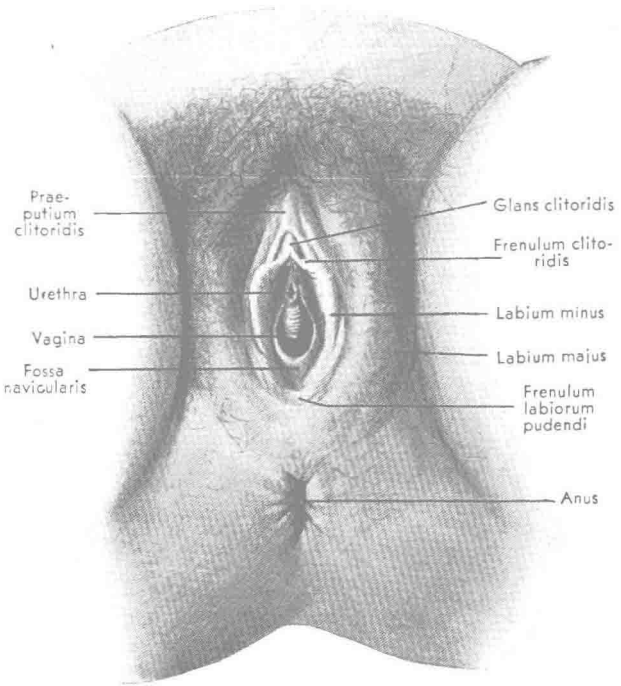

Fig. 1. External genitals.
(From H. K. Corning.)

4. With the patient lying in the lithotomy position, the following bony parts of the pelvis can be palpated: the pubic arch and rami on each side as far back as the tuberosity of the ischium and, behind the anus, the coccyx. On abdominal palpation, the upper margin of the pubic bones with their spines, and the crests of the ilium with their anterior superior spines can be felt; and on deep palpation, the promontory of the sacrum. In thin women the brim of the true pelvis can also be felt.

EXTERNAL GENITAL ORGANS

The external organs of generation, which are together spoken of as the vulva, include all the structures that can be seen between the pubes and the perineum. They are as follows:

MONS VENERIS

The mons veneris is a pad of fat in front of the pubic bones which after puberty is covered with hair. In some women this pubic hair strays upwards in the middle line towards the umbilicus, as in the male. All hair should be shaved prior to an abdominal or vaginal operation. The mons veneris forms the anterior boundary of the vulva and, when the woman is erect or on her back with her legs together, is usually the only part of the vulva visible.

LABIA MAJORA

The labia majora form the lateral boundaries of the vulva and consist of rounded folds of skin projecting downwards and backwards from the mons veneris, under which they unite to form the anterior commissure, to the perineum, where they fuse between the vaginal orifice and the anus to form the posterior commissure. In women who have borne children this posterior commissure is usually flattened out and the perineum shortened. The skin over the outer surface of each labium contains many sebaceous glands and is covered with hair after puberty. The mesial surfaces are smooth, moist and devoid of hair and are in contact except when the legs are separated. The bulk of each labium is composed of fatty connective tissue and unstriped muscle with vascular, lymphatic and nerve supply. The labia majora represent the scrotum in the male. Buried in the posterior part of each labium is a small gland called the Bartholin's gland. It secretes a clear sticky fluid which escapes by a small duct through an orifice just outside the hymen. Its function is to provide lubrication during coitus. If the duct gets blocked a retention cyst forms, and if it becomes infected, a large Bartholinian abscess may result.

LABIA MINORA OR NYMPHAE

The labia minora or nymphae are two narrow folds of integument lying on each side of the middle line just within the

labia majora. Those parts corresponding to the anterior two-thirds of the major lips are most prominent and crenated at their edges. The posterior thirds fade away, almost coalescing with the inner aspects of the large outer labia. When hypertrophied, or after childbirth, they hang below the labia majora, but ordinarily they are concealed by the larger folds. The labia are covered by moist hairless skin and contain connective tissue, a little erectile tissue in the form of unstriped muscle, a plentiful vascular system, lymphatics, nerve endings and numerous sebaceous glands. Anteriorly the labium minus on each side splits into two folds. The upper of these unites, above the clitoris, with the corresponding fold of the opposite side to form the prepuce of the clitoris. The lower folds unite below the clitoris to form the frenum. Posteriorly the attenuated labia minora unite across the middle line behind the vaginal orifice to form the fourchette, a skin fold which, when the parts are separated, is thrown into a sharp edge. In women who have borne children this usually disappears. In front of the fourchette, between it and the hymen, is situated the depression called the fossa navicularis. It is in this hollow that the primary sore of syphilis is often found in an infected woman.

CLITORIS

The clitoris is the homologue of the penis and has some resemblance to it. It is situated in the middle line just below the anterior commissure, and is attached to the under surface of the symphysis pubis by the suspensory ligament and to the inferior margins of the pubic rami by the crura cavernosa. It projects as a small, elongated mass of erectile tissue, capped, like the penis, by a rounded glans which is covered with a very sensitive epithelium; a prepuce formed from the labia minora, as previously explained, hangs over it. Care must be taken when preparing a patient for a vaginal operation to clean the space between the under surface of the prepuce and the clitoris, as in this situation a yellow secretion known as smegma collects. This is often the underlying cause of a pruritus. During coitus the clitoris becomes erect and helps to produce the orgasm in the female; care should therefore be taken, on account of its sensitiveness, to avoid touching it when making an examination or when passing a catheter.

All structures outside, including the labia minora, are covered by skin. Internal to the labia minora, the surfaces of the vulva are clothed by what is considered to be mucous membrane of the squamous type.

THE VESTIBULE AND EXTERNAL MEATUS URINARIUS

The vestibule is a triangular area covered by squamous mucosa. Its apex is above at the clitoris and its base below at the front margin of the hymen; laterally, it is bounded by the labia minora. Centrally placed at the base and about 1 in. (2·5 cm.) below the clitoris, is the external urethral orifice, which lies in the middle of a small puckered hillock of mucous membrane.

The vestibule is visible only when the labia are drawn apart. In the natural condition, the mucosa of the vestibule is folded on itself so that the triangular area becomes a slit, at the lower end of which the urethral opening is concealed.

The vestibule should always be carefully swabbed with a mild antiseptic before a catheter is passed.

THE HYMEN AND VAGINAL ORIFICE

The hymen consists of a septum of squamous membrane closing over the vaginal orifice. In reality, the hymen is composed of two lateral folds like diminutive labia, which are united above and below, and which, when the legs are apposed, lie one against the other. Between them is situated the narrow slit of the vaginal orifice, which has its long axis running from before backwards.

However, the vaginal orifice varies considerably in different women. In some the opening in the hymen is small. In others the hymeneal orifice, though virginal, may be relatively large. The shape of the opening may be round and central (hymen annularis) or it may be large and half-moon-shape (hymen falciformis). In still other cases there may be more than one opening (hymen cribiformis). Occasionally the hymen is not perforated at all (hymen imperforatus), a serious malformation that leads to the retention of menstrual discharge after puberty. It varies in consistency, in some cases being so soft and yielding that a vaginal examination can be made with ease in virgins (patulous hymen). In others it is so tough and resistant that in married women it has to be incised before coitus can take place

(hymen rigidus). With the consummation of marriage the hymen is torn or is opened widely. When it is torn, the lacerated edges remain as a series of projecting tags of mucosa, the carunculae

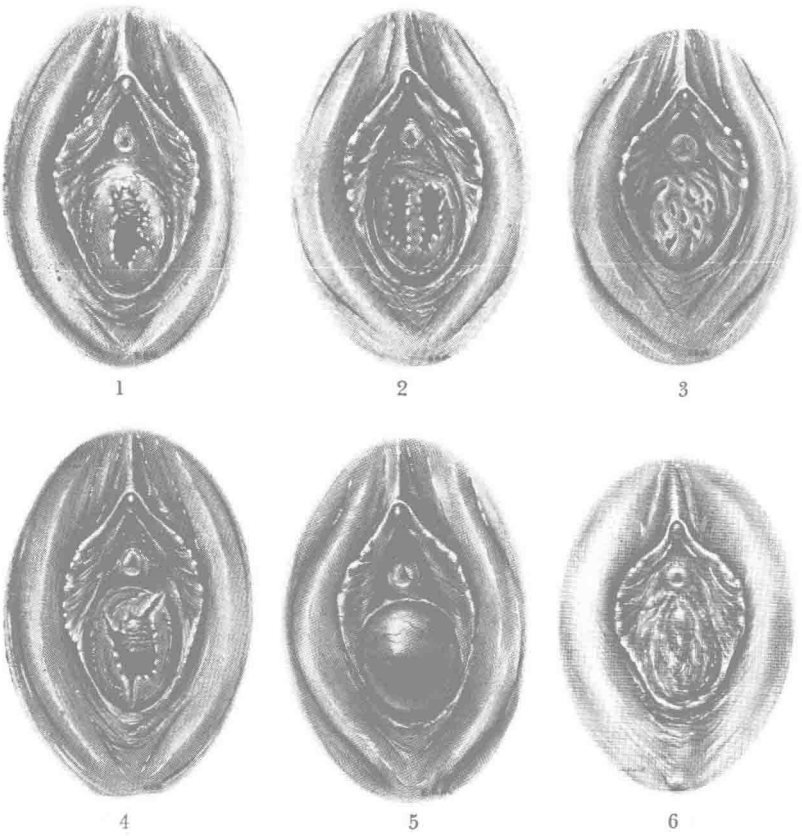

Fig. 2. The vaginal orifice. 1. Serrated hymen. 2. Septate hymen. 3. Cribiform hymen. 4. Ruptured hymen. 5. Imperforate hymen. 6. Absent vagina.

(Adapted from Bland.)

myrtiformes. This is the condition that obtains in all cases after the birth of the first child.

It is to be noted, from the medico-legal standpoint, that coitus does not necessarily cause rupture of the hymen; for it is known that pregnancy may occur though the hymen is ap-

parently intact. In these cases penetration has been so partial or the hymen so resilient that rupture has not taken place. In other cases insemination has occurred without penetration.

THE PERINEUM

Externally the perineum forms the skin area, about $1\frac{1}{2}$ in. (4 cm.) in length, which extends between the vagina and the anus. Above this area is situated the perineal body which consists of a mass of muscular, fibrous and fatty tissue separating the lower ends of the vaginal and anal canals. On median section, it is triangular, with its base below, where it is covered by the skin of the perineum, and its apex above, where the rectum and vagina first come into close proximity. The lower $1\frac{1}{2}$ in. of the posterior wall of the vagina is closely attached to its anterior aspect and the $1\frac{1}{2}$ in. of the anal canal to its posterior aspect.

Thus, when the perineum and perineal body are intact, the vaginal canal slopes forward and the anal canal backwards. This angle of separation prevents the vulva from contamination during the act of defaecation. When, however, the perineum and perineal body have been torn or stretched, as so frequently happens during childbirth, the angle of separation disappears and the vulva is likely to be soiled by the passing of faeces. It is thought that this may account for the prevalence of infection not only of the vagina and cervix uteri but also of the bladder in parous women.

INTERNAL GENITAL ORGANS

The internal genital organs comprise the following structures: (i) vagina, (ii) uterus, (iii) Fallopian tubes, and (iv) ovaries.

VAGINA

The vagina, leading from the vulva to the uterus, is a fibromuscular canal lined by squamous mucous membrane which is devoid of glands. The lining is thrown into transverse folds (rugae) which become smoothed out by repeated child-bearing. These folds are particularly prominent anteriorly and posteriorly. Just below the urinary meatus there is a marked projection of the vaginal mucous lining, known as the anterior column. This, at times, becomes so hypertrophic during preg-