RALPH M. WYNN

Obstetrics and Gynecology:

The Clinical Core

SECOND EDITION

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To my medical students and residents,
without whose enthusiastic support this volume
would not have been written

Preface

EDUCATION may be defined as planned change in behavior of the student over a period of time. Medical educators, in common with their colleagues in other fields, must therefore select experiences and teach them as rapidly and efficiently as possible to the level of performance described as acceptable behavior. The planning of medical curricula, including the process of selection, design, and sequential arrangement of instructional units, requires a rationale and thus cannot be left to chance.

About 10 years ago the American Association of Obstetricians and Gynecologists Foundation embarked on its venture of sponsoring a subcommittee to plan a core curriculum in obstetrics and gynecology that might, with local modifications, be tested in schools of medicine throughout the United States. Faculty worked closely with professional educators to construct a curriculum based on four educational principles: development of objectives, preparation of an entry test, construction of a set of learning activities, and formulation of procedures for evaluation of the results.

A core curriculum defines the criteria for minimal competence required of all medical students. It provides at least three major advantages in the educational process. First, it reduces the amount of purely factual material to be learned. Second, it identifies the requisite knowledge and skill for all medical students. Third, it increases the time available for elective studies in the basic or clinical sciences.

The availability of a core curriculum that details the data base frees the teacher from the task of mere dissemination of information and allows him time for influencing attitudes and demonstrating skills. In a modern curriculum the student may proceed at his own rate to accomplish the educational objectives of the core and may devote more time to mastering areas of difficulty. The faster learner may pursue areas in depth or

proceed to other areas. The construction of a core curriculum is thus a step toward increased flexibility in the undergraduate medical curriculum. It spells out the *minimal needs of every physician for knowledge and skills in obstetrics and gynecology* and allows time for additional electives or special tracks for students who choose a career in this field.

A good textbook is probably the fastest means of transmitting a large body of knowledge. The skilled reader can control his rate of learning and can read the printed page more rapidly than any lecturer can deliver the same material intelligibly. As self-instructional media and synopses increase in quality and as retrieval of information from handbooks and other reference sources improves, the classic textbook, which struggles in vain to be both instructionally sound and encyclopedic, will gradually disappear. Quite different is the student text based on educational principles. It seldom presents new knowledge. Instead, it offers the available knowledge to the student in a *selective, sequential, simplified* presentation.

Although I have sought the advice of many colleagues and students in the preparation of this book, I accept full responsibility for the selection and arrangement in sequence of the material. I have made extensive use of the valuable publication of the American College of Obstetricians and Gynecologists entitled *Obstetric-Gynecologic Terminology* and have attempted to make the definitions of terms in this text consistent with the recommendations of the Committee of Terminology of the A.C.O.G. wherever possible.

During preparation of this second edition, changes were made on virtually every page of the text. The most extensive revisions occurred in the sections on gynecologic endocrinology, oncology, and particularly control of reproduction. I have attempted to include all essential new information without substantially increasing the size of the book. The largest additions were in basic reproductive biology, which includes sections on gametogenesis, embryology, placental structure and function, and genetics. This change reflects a trend to incorporation of a brief course in basic human reproduction in the curricula of many American medical schools.

Among my colleagues who provided valuable advice in preparation of this edition are, in alphabetical order: Dr. Jack

Bulmash (medical complications), Dr. Leon Chesley (preeclampsia), Dr. Timothy Miller (infections), Dr. Thomas Sedlacek (oncology), Dr. Richard Stark (gametogenesis), Dr. Albert Tsai (endocrinology), Dr. Harold Verhage (embryology), Dr. Asuncion Zamora (anesthesiology), and Dr. Lourens Zaneveld (male reproductive biology). Major assistance was provided by several of my former students, who commented from the consumer's point of view during each phase of preparation of this text. Mr. Paul Becton proofread the entire text in both galley and pages and capably assisted in preparation of the index. I am again grateful to Mr. Edward Wickland, Mr. Thomas Colaiezzi, and Ms. Mary Mansor of Lea & Febiger for their efficient and cooperative expedition of all phases of production of this textbook.

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Notes on the use of this text

The importance of each paragraph is indicated by the presence or absence of vertical lines at the left-hand margin of the text. The information contained in the paragraphs with no vertical lines is the *clinical core*. Because this is the minimal information in obstetrics and gynecology required of all medical students, 100% of it must be mastered. The italicized words provide for a rapid topical review. The material within paragraphs with a single vertical line at the left-hand margin contains additional important elements of the data base that may be included appropriately on undergraduate examinations in obstetrics and gynecology. The material within paragraphs with a double vertical line at the left-hand margin is presented primarily for students who are considering a career in this field.

The core text defines only the data base required for minimal competence in the cognitive domain of obstetrics and gynecology. Detailed information, illustrative material, and references must be sought in standard textbooks, specialized treatises, and periodicals. Audiovisual aids, lectures, conferences, rounds, and clinical experiences with patients are required to achieve educational objectives in the affective and psychomotor (skills) domains. The basic reproductive biology included in this volume should provide the student with essential information for successful completion of an entry test to a clerkship in obstetrics and gynecology.

Contents

UNIT I

History and Physical Examination

■ The Gynecologic and Obstetric History

The patient's *age* is a most important factor in the evaluation of gynecologic signs and symptoms. For example, in the *childbearing* age the most important causes of *uterine bleeding* are associated with disorders of *reproduction*. In *postmenopausal* women, *carcinomas* of the genital tract figure prominently in differential diagnosis, whereas in *adolescent* girls the cause of abnormal uterine bleeding is much more likely to be *endocrine*.

Gravidity is synonymous with pregnancy and a *gravida* is a pregnant woman. A *primigravida*, or gravida 1, is a woman who is pregnant for the first time. A *secundigravida* is a woman in her second pregnancy. A *multigravida* is a pregnant woman who has been pregnant *several times*. The numeric designation of gravidity is not altered by *plural gestation*. For example, a patient who is pregnant for the first time with *twins* is *gravida 1*, and she becomes gravida 2 during her second pregnancy.

Parity is the state of having given birth to an infant weighing *500 g* or more, alive or dead. When the weight of the infant is not known, an estimated gestational length of *20 weeks* or more, calculated from the first day of the last menstrual period, may be used to establish parity. For purposes of defining parity, *plural gestations* are counted the *same as singleton* pregnancies.

A *primipara* is a woman who has given birth for the first time to an infant or infants, alive or dead, weighing 500 g or more. A primigravida is often incorrectly designated a primipara. A *multipara* is a woman who has given birth two or more times to an infant or infants weighing 500 g or more, alive or dead. The designation *"grand" multipara* is often applied to a woman who has given birth seven or more times to an infant or infants weighing 500 g or more.

According to one common method of summarizing the obstetric history, the number of *abortions* is listed separately. For example, a woman who has had two term pregnancies, one of which was a twin pregnancy, and one abortion, and is now pregnant would be *gravida 4, para 2, ab 1*. Abortions should be recorded as *spontaneous* or *induced* (medically indicated or elective).

An alternative scheme for recording obstetric data uses four digits. The first refers to the number of *term* pregnancies, the second to the number of *premature* deliveries, the third to the number of *abortions,* and the fourth to the number of *living children.* The history of the gravida 4, para 2, ab 1 just described may be abbreviated in the four digit system as 2-0-1-3. A woman whose only pregnancy terminated in premature quintuplets, all of whom survived, would be designated para 0-1-0-5.

A *parturient* is a woman in the process of giving birth. A *puerpera* is a woman who has given birth during the preceding 42 days.

The *chief complaint* is the basic reason that the patient is seeking medical attention. In arriving at a diagnosis, it is often profitable to use the *patient's own words* in describing her chief complaint. Clinical acumen and experience are often required to discern the *real reason* behind the alleged chief complaint. For example, sexual incompatibility may often be presented as vulvar pruritus, or a fear of cancer may be expressed as concern over a trivial vaginal discharge.

The *present illness* should be described in detail. *Listening* to the patient carefully *without undue direction* of the questioning will usually provide most of the pertinent diagnostic information. In obtaining a gynecologic history, details of the following signs and symptoms should be elicited: changes or abnormalities in *uterine bleeding; pain* in the lower abdomen, flank, vagina, or external genitalia; a *lesion* on the *external genitalia* or a palpable *mass* in the *pelvis;* a change in the quality or quantity of *vaginal discharge;* changes in *gastrointestinal* or *urinary habits; protrusion* of the *vaginal wall;* and *infertility.*

When the major complaint involves a change or abnormality in *uterine bleeding,* a *detailed menstrual history* should be obtained at this point. When the chief complaint and present illness are not related primarily to vaginal bleeding, an abbreviated menstrual history should be recorded after the present illness.

The menstrual history should include the age of onset of menstrual periods (*menarche*), the *interval* between the periods, the *duration* of flow, the *amount* of flow as measured by the number of pads or tampons used, the date of the *last normal menstrual period* (LNMP), and the date of the *preceding* menstrual period (PMP). A formula for recording menarche, interval

between periods in days, and duration of flow in days is exemplified by $14 \times 28 \times 4$, which indicates that menarche occurred at age 14, the first day of the period follows the first day of the preceding period by 28 days, and the duration of flow is 4 days. *Dysmenorrhea* (painful periods) and signs and symptoms of *premenstrual tension* should be recorded as part of the menstrual history.

Primary dysmenorrhea (essential, or functional, dysmenorrhea) is menstrual pain in the absence of a recognized pelvic lesion (p. 223). *Secondary dysmenorrhea* is menstrual pain caused by demonstrable pelvic disease.

Premenstrual tension is a condition characterized by increased nervousness, irritability, emotional instability, depression, frequent headaches, and edema. The syndrome may include painful swelling of the breasts, abdominal bloating, nausea, vomiting, fatigue, and a variety of other complaints. Premenstrual tension occurs during the 7 to 10 days preceding menstruation and usually disappears a few hours after the onset of menstrual flow (p. 224).

In older women, the date of the last menstrual period (*menopause*) and a history of associated symptoms such as hot flashes and sweating should be elicited. The menopause strictly refers to the cessation of menstrual function, whereas the *climacteric* is the period of a woman's life characterized by cessation of menses as well as vasomotor changes and a variety of endocrine, somatic, and psychic readjustments (p. 217).

In an adult woman the relation of changes in uterine bleeding to use of *exogenous hormones* including *oral contraceptives* and *postmenopausal replacement* should be clarified. Changes in menstrual patterns should be distinguished from uterine bleeding unrelated to the menses.

Menorrhagia is excessive (*hypermenorrhea*) or prolonged menstrual bleeding, whereas *metrorrhagia* is irregular acyclic uterine bleeding. *Menometrorrhagia* is irregular or excessive uterine bleeding during menstruation as well as between menstrual periods. Menometrorrhagia may be a sign of a variety of diseases and is not a diagnostic entity.

Hypomenorrhea is a diminution in the amount of flow or a shortening of the duration of menstruation. *Oligomenorrhea* is a reduction of the frequency of menstruation, in which the

interval between the cycles is longer than 38 days but less than three months. The opposite of oligomenorrhea is *polymenorrhea,* which is abnormally frequent menstruation.

Abnormalities of bleeding confined to the *menses* are often of *endocrine* origin, whereas *intermenstrual* bleeding suggests other lesions including benign and malignant *neoplasms.* Bleeding after *contact* (intercourse or douching) should always suggest a malignant lesion.

Pain should be described in terms of *location, onset,* and *character.* The history should note whether the pain is diffuse or localized, sharp or dull, constant or intermittent, mild or severe; whether it is abdominal, pelvic, vaginal, or lumbar; and whether it *radiates* to the thighs or is *referred* to the shoulder. Pain referred to the low back or buttocks is often associated with diseases of the cervix, urethra, or lower portions of the bladder and rectum. Pain localized to the lower abdomen may arise from the uterus or vagina. Adnexal pain is usually referred to the lower abdominal quadrants and often radiates down the medial aspect of the thigh. Dysmenorrhea and dyspareunia should be recorded at this point. The pain should be described as acute or chronic and its onset as sudden or gradual. If a *precipitating event* is ascertained, it should be recorded along with associated signs and symptoms of *urinary tract* or *gastrointestinal disease,* such as nausea, vomiting, dysuria, chills, and fever. The *sequence* of events preceding and following the onset of pain should be meticulously described and recorded chronologically. Any factors that ameliorate or aggravate the discomfort should be noted.

In describing *vaginal discharge,* the relation to *menses* and *coitus* and the *response* to *therapy* should be noted. It must be recognized that vaginal discharge may stem from a primary lesion of the *vulva, cervix,* or *corpus.*

In obtaining a history of *urinary incontinence* it is necessary to differentiate *stress incontinence* (loss of urine upon increase in intraabdominal pressure, as in straining and coughing) from *frequency* and *urgency* with dribbling unrelated to stress and from *true incontinence,* which is a more or less constant loss of urine. In eliciting a history of *fecal incontinence,* obstetric injuries and gynecologic procedures of possible etiologic importance must be noted.

Various complaints referable to *pelvic relaxation* are common in parous women. The *history* is of paramount importance in these patients because treatment is based more on symptoms than on purely anatomic defects.

Tables 1 through 3 are useful guides to recording the obstetric and gynecologic history and physical examination in institutions that employ this conventional method of obtaining these

TABLE 1. Gynecologic and Obstetric History

I. Age and Parity

II. Chief Complaint

III. Present Illness

A. *Bleeding*
1. Change in interval, duration, and amount of menstrual bleeding
2. Intermenstrual bleeding
3. Contact bleeding
4. Postmenopausal bleeding
5. Relation to exogenous steroids

B. *Pain*
1. Location
2. Relation to menses
3. Radiation
4. Character

C. *Mass*
1. Location
2. Time of onset
3. Rate of growth
4. Pain, discomfort, pruritus, discharge, or bleeding
5. Relation to menses

D. *Vaginal discharge*
1. Color, odor, and consistency
2. Onset, duration, and quantity
3. Pain or pruritus