WHAT IS GAINED BY THE UNION OF OBSTETRICS AND GYNECOLOGY IN A TEACHING HOSPITAL?*

By J. MORRIS SLEMONS, M.D.,
NEW HAVEN, CONN.

THERE are strong forces at work to-day for progress in medical education, and several institutions devoted to this purpose have already undertaken changes which, though radical, are none the less the result of evolution. Close upon the heels of the innovation which took students to the bedside for instruction, came another step, the dedication of a few hospitals to teaching purposes. When the venture proved successful, teaching hospitals multiplied and have naturally prepared the way for the most recent innovation in medical education, the introduction of full-time clinical teachers.

The present course of medical instruction is sharply divided into two parts designated as the "pre-clinical" and the "clinical" years. In the earlier or pre-clinical period the energies of the medical faculty are entirely devoted to the instruction of students and to investigation planned to widen the scope of medical knowledge; in these years the care of the sick forms no part of the duties of the instructors. The members of the faculty, however, who teach the students in the later or clinical years are not only concerned with teaching and research but must also shoulder the responsibility for the care of the sick. There is general agreement that the activities with which the pre-clinical instructors are busied are most efficiently prosecuted when they are entrusted to men who devote their time exclusively to University work; and in these earlier, pre-clinical years the whole-time medical faculty has become an established institution.

It is only a little while ago that the suggestion was made to extend the whole-time principle to the clinical years, yet the experiment has been tried and proved successful. Having directed a department on this basis for nearly four years, I am convinced that the whole-time principle is at once productive of more comprehensive clinical instruction and of greater opportunities for the pursuit of research. However, before considering these results, let us have clearly in mind the situation which formerly prevailed, and, indeed, still exists in most medical schools so far as it relates to gynecology and obstetrics.

To begin with a matter of definition, what is meant by obstetrics and what by gynecology? Etymologically, the first term means to stand in front of; the second means the science dealing with diseases peculiar to women. The derivation of the word, obstetrics, refers to the position occupied by the midwife before the chair in which, formerly, her patients were placed preliminary to delivery. Consistent with its definition, the field of obstetrics, some physicians still insist, should be limited to the care of women having completed the full term of normal pregnancy. This narrow interpretation is given by a few gynecologists who, however, do not reckon the boundaries of their practice with the same precision. Judged by the contents of gynecological textbooks, this subject includes not only abortion, miscarriage, ectopic gestation, the treatment of birth-injuries, pelvic infections and tumors, but also hernia, varicose veins, diseases of the urinary tract, of the umbilicus, and of the breast. The term gynecologist, then, once said to be synonomous with abdominal surgeon, is not yet broad enough to cover completely the activity of the specialist who thus calls himself.

Neither in the case of obstetrics nor of gynecology does present practice conform with reasonable definitions of these terms. For purposes of accurate definition, the scope of the former subject might be broadened to include all cases of pregnancy and the complications which result from it; the scope of the latter limited to diseases of the female generative organs in non-pregnant women. In practice, however, it is difficult or impossible to adhere to these subdivisions; they overlap to an extent which leaves much in common to the obstetrician and to the gynecologist. In these circumstances, what could be more rational than a combination of these subjects. Such an arrangement, as I hope to show, eminently serves to improve methods of instruction, and it also fits in well with the details of hospital organization.

Not a few objections have been urged against this union, I know very well. To enumerate them would not be helpful, for objections of a theoretical nature cannot stand against the demonstration of benefits which actually accrue when the union I advocate has become an accomplished fact. Consequently, it is my purpose to set forth in some detail the results of the work of a University department devoted to the subjects in question—the work of a teaching clinic occupied with the management of cases of pregnancy and with the treatment of patients suffering from diseases of the female generative organs.

The organization of such a department, called a Woman's Clinic, must be along broad lines, if it would serve the threefold purpose of teaching, investigation, and the care of the sick. Its resources must include: first, a free dispensary; second, hospital facilities for de-

* Read at the Annual Meeting of the Medical Society of the State of New York, at Utica, April 25, 1917.

serving patients who are unable to pay for the treatment they receive; third, equipment for the satisfactory conduct of cases of childbirth in the homes of the poor; fourth, nurses trained in Social Service work; fifth, laboratories where problems related to medical care may be studied; and sixth, a medical staff adequate for the various activities of the clinic. While our staff-organization in this department of the Yale Medical School is still in the formative period, it is proceeding along the lines just indicated, and, at present, exclusive of internes, consists of four men who devote all their time to hospital and university work. In these circumstances, I believe you will be interested in our experience, and our estimate of what is gained by the union of gynecology with obstetrics in a teaching hospital.

First, with regard to didactic teaching. Because the medical curriculum is becoming more and more crowded through the addition of new subjects like Public Health, and the increasing importance of others, as Psychiatry, it is necessary to economize the time devoted to any given subject. In this light, the union I advocate is justified; it leads distinctly to concentration and to efficiency, for it avoids reduplication. The discussion of many topics, for example, menstruation and its disorders, the repair of perineal lacerations, the treatment of malpositions of the uterus, is taken up but once; whereas, when obstetrics and gynecology are taught separately these same subjects are discussed now by one group of instructors and now by another group. Properly arranged, the combined course taught by a single staff, begins with the anatomy and physiology of the pelvic organs including normal pregnancy, labor, and the puerperium; having this ground-work, the student proceeds, on the one hand, with the pathology of the reproductive process; and, on the other hand, with the diseases of the generative organs. The story develops logically; the principle of concentration makes exposition concise; and the chapters cohere because they have the same anatomical basis.

In clinical instruction, also, it is helpful to combine the subjects of obstetrics and gynecology, and the benefits of such a union are obvious, for example, in connection with problems of diagnosis. How could the student be taught so well that he must be on guard not to confuse the pregnant uterus with tumors of the pelvic organs? With cases of both types at his disposal, the instructor may compare them during the same ward-rounds, or, if need be, in adjoining beds. Similar advantages pertain to the presentation of other chapters in the border-land of gynecology and obstetrics. Thus, there is opportunity to contrast cases of acute, subacute, and chronic puerperal infection; or to compare the results of puerperal infection with those of venereal infection. And, how may the facts regarding retroversion of the uterus be made so impressive as when a clinic affords the material to exemplify the relation of this abnormality to dysmenorrhœa, to sterility, to abortion, to vomiting of pregnancy, and to unsatisfactory convalescence after child-birth. The omission of any one of these effects leaves the significance of retroversion but partly understood. Nor is the story complete unless the treatment of retroversion and its results may be illustrated from the instructor's own experience. Comprehensive demonstrations of this kind are difficult or impossible if gynecology and obstetrics are kept separate in the hospital. With a high, spite-fence between these departments, it is not until students have become full-fledged practitioners that they appreciate the intimate relationship between the subjects in question.

The second helpful influence, we find, which results from the union of these subjects, pertains to productive research; it favors both a higher standard of investigation and an increase in its quantity. And this phase of the subject has a pertinent interest for practitioners, because it is a broader knowledge of the physiology and pathology of the reproductive organs of women which will lead to needful improvements in rational gynecological treatment.

Many obstetrical problems, it must be admitted, bear upon gynecology; and the converse of this proposition is equally true. It follows, then, that the solution of such problems becomes most likely if the investigator is familiar with both subjects. The reward for bi-focal vision of this kind is illustrated by a recent experience which I may relate, for one specific instance, to which the principle I am contending for was applicable, may be more convincing than hours of argument based upon generalization.

Several months ago a case of premature separation of the placenta was referred to the New Haven Hospital. We had to deal with the type of case in which hemorrhage had caused not only the premature separation of the placenta, but also had seriously damaged the uterine musculature. Consequently, Cæsarian section was performed and at the operation the deep blue color of the uterus, due to venous congestion, confirmed this diagnosis; and hysterectomy was performed to prevent subsequent hemorrhage, for in these circumstances, failure of the uterus to retract and contract properly may lead to a fatal issue. Microscopic study of the tissues revealed a

multitude of small hemorrhages throughout the uterus; the muscle-fibres were torn apart, fragmented and degenerated, and the blood vessels were the seat of a proliferative change. This picture was accurately described by Doctor J. Whitridge Williams, who recently reported two of these cases, but was unable to identify the cause—a fact, as you will see, for which the limitation of his hospital service to obstetrical patients was responsible.

After we became interested in the causation of this lesion, a patient entered the hospital suffering from symptoms referable to a myomatous uterus. At the operation, it was found that one of the multiple myomata, which was pedunculated, had become twisted upon its pedicle and externally resembled in color the pregnant uterus of the case I mentioned first. Moreover, when the tumor was bisected, hemorrhagic lesions were found scattered through the myomatous tissue. That the twisted pedicle of the tumor was responsible for these lesions was not to be questioned. And, naturally, from this experience, we had a clue that in the case of premature placental separation, similar lesions were called forth by some interference with the circulation through the uterine vessels. Probably, too, the fundamental factor in the latter pathological problem was an unusual degree of torsion of the uterus.

Given this hint, investigation was begun, and the question put to Nature was, "What are the effects upon the pregnant uterus when the venous flow is blocked?" In a series of experiments upon rabbits, my associate, Doctor Arthur Morse, has found that the effects include the development of lesions imitating very closely those in human cases. The placenta becomes separated from its attachment by a hæmatoma, and hemorrhages appear in the wall of the uterus itself. Though experimental work is still in progress, his results provide convincing evidence that in many cases of premature separation of the placenta, at least one factor of prime importance is a mechanical interference with the escape of venous blood from the uterus; and, probably, torsion of the uterus is a clinical phenomenon against which women must be safeguarded during pregnancy. Thus, premature separation of the placenta, a complication not infrequent and not without the most serious consequences for the fetus, often for the mother as well, a complication never clearly understood may now become the object of rational prophylaxis. And, the clue which led to the solution of this practical obstetrical problem, we must remember, came from the treatment of a gynecological patient.

Immediately, other unsolved problems come to mind regarding which investigation is most likely to be fruitful when undertaken by men familiar both with obstetrics and gynecology. To mention a very few of these, the diagnosis of early pregnancy, the function of the corpus luteum, the significance of menstruation, and the prevention of cancer of the uterus, are problems with a dual aspect so long as we cling to the custom of separating cases of pregnancy from those of pelvic disease. This much, however, is generally granted; some advantage exists in the combination I advocate so far as teaching and research are concerned. We find, at least, that the same men are contributing to the advance of both subjects and deal almost indiscriminately with obstetrical and gynecological problems. Standard year-books include the literature of both subjects, and both are dealt with by the same scientific societies. Magazines, intended for clinicians especially interested in the reproductive organs of women, show no preference, but accept and publish, side by side, one paper dealing with obstetrics, and another with gynecology.

It is chiefly with regard to practice we are told that the union of obstetrics and gynecology will never do; and yet all of us know men who have found such a combination satisfactory. Neither is our own experience unique, that these subjects may be combined satisfactorily in a teaching hospital; for in European countries, such a union is not the exception, but the rule. However, significance attaches to the fact that this scheme proves equally adaptable to American schools, and that in our experience, the care of patients is no less efficient when obstetrics and gynecology are under one directorship.

In the Woman's Clinic of the Yale Medical School, during the past year, 628 patients were treated. Of these, 106 patients were attended in confinement at their homes; 258 were delivered at full term, or nearly so, in the hospital; and 264 were treated for various conditions generally grouped as gynecological diseases. The last group included an extensive variety of complaints, and to illustrate the scope of the service, a few may be enumerated. There were 50 cases of abortion, six of Cæsarian sections, and one of ruptured uterus. Secondary repair of perineal injuries was performed 32 times and four of these were cases of complete tear. There were thirteen operations for uterine myomata, ten for ovarian cyst, and three for tubal pregnancy. Suspension of the uterus was performed 23 times, supravaginal hysterectomy, 18 times; panhysterectomy, four times; and the Wertheim operation, twice.

The scope of the work of this department (a report of which for the past year is appended) demonstrates that gynecological and

obstetrical patients may be handled satisfactorily by one and the same department. A number of conditions often represented in the reports of gynecological clinics are conspicuously absent here, for we lay no claim to the whole domain of abdominal surgery. And it is also significant that more than a third, indeed almost half, of our gynecolgical patients were suffering from complaints directly the result of childbirth. It cannot be reasonably denied that birth-injuries and infections should be included in the sphere of obstetrical practice, for no one, I presume, would deny the obstetrician the right to leave his patients in good physical condition. The remaining patients were suffering from various lesions of the pelvic organs which we also believe may be satisfactorily treated by men competent to do obstetrical surgery.

"What are the results when the obstetrical department of a hospital has added to its service the treatment of pathological conditions of the female generative organs?" Our mortality of 2 per cent. is not unlike that of other clinics to which only patients suffering from gynecological diseases are admitted. And it is only fair to add that the mortality given includes three deaths from uterine carcinoma where no operation was performed. We have charged ourselves with these deaths because the New Haven Hospital includes beds devoted to incurable diseases, and patients often are admitted far advanced along the downward path to remain in the hospital until death results from cachexia or metastases in vital organs.

Upon discharge from the department, 528 patients were well, 66 improved, and seven unimproved; eleven were transferred because their complaints required either medical or surgical treatment. These figures are quoted merely to afford the basis for comparison with the results of pure gynecologists. Having taken the pains to make a comparison of this kind, I am convinced our experience does not support the argument that satisfactory results may not be obtained unless separate departments exist for the treatment of obstetrical and gynecological patients.

If the clinical results are satisfactory when obstetrics and gynecology are united in the hospital, the benefits accruing from more comprehensive instruction and from the impetus to productive work are a clear gain. These are important factors in medical education. Proper methods of instruction and contact with medical investigation, though the prospective practitioner does not participate in the latter, best qualify him for independent thought, for a progressive professional life and for action in the face of novel clinical difficulties. As instructors, we seek to provide a medical curriculum and a hospital organization which will enable him to practise most efficiently, for he is likely to imitate the methods he has seen in operation. Thus, an important result of the union I advocate is to place before his eyes conservative obstetrics and conservative gynecology. Men, who practice both soon learn that radical procedures in either case are often followed by distressing results, and such results are more likely to be witnessed by physicians who do not limit their practice either to gynecology or to obstetrics. The practitioner then who stands convinced of the need for more conservative practice may confidently lend his influence toward the union of these subjects in the teaching hospital. Probably, when this principle has become more widely accepted, the use of the unfortunate term, obstetrics, will be abolished. At least, we may hope so, for the branch of medicine which deals with the physiology and the pathology of the female generative organs and the treatment of clinical conditions dependent upon them should be known as gynecology.

APPENDIX I.

During the year 1916 the following conditions were treated in the Department of Obstetrics and Gynecology, Yale Medical School. The number of cases also is indicated.

Pregnancy, Complications of	
Abortion, Threatened	2
" Inevitable	1
" Complete	12
" Incomplete	36
" Missed	1
Hyperemesis Gravidarum	4
Eclampsia (Antepartum)	3
Toxæmia, Pre-eclamptic	11
Other Toxæmias	5
Hydatidiform Mole	2
Placenta Previa	5
Premature Separation Placenta	2
Death of Fetus	1
Syphilis	9
Retroversion of Uterus	1
Endocarditis	2
Pneumonia	1
Pyelitis	2
Malaria	1
Anæmia	1
Epilepsy	1
Labor	
Normal	282
Premature	24
Breech Presentation	8
Face Presentation	1
Transverse Presentation	3
Twins	3
Ruptured Uterus	1
Eclampsia (Intrapartum)	3
Placental Bacteremia	5
Prolapse of Cord	1
Fetal Hydrocephalus	1

Puerperium, Complications of	
Eclampsia (Postpartum)	5
Endometritis	5
Peritonitis	1
Phlebitis, Femoral	1
" Saphenous	1
Typhoid Fever	1
Abscess of Breast	1
Postpartum Hæmorrhage	2
Retained Placenta	1
Vulva, Diseases of	
Bartholinitis	1
Hæmatoma of Labium	1
Vagina and Perineum, Diseases of	
Cystocele	10
Perineal Relaxation	28
Complete Perineal Tear	4
Carcinoma (Vagina)	1
Cervix, Diseases of	
Laceration	7
Polyp	3
Hypertrophy	2
Carcinoma	8
Uterus, Diseases of	
Dysmenorrhœa	2
Menorrhagia	7
Retroversion	19
Prolapse	5
Subinvolution	1
Endometritis, Chronic	3
Pyometra	2
Myomata	13
Adenocarcinoma	2
Tubes, Ovaries, Ligaments and Pelvic Peritoneum, Diseases of	
Ectopic Pregnancy	3
Cyst, Ovarian	6
" Parovarian	2
Hæmatoma, Pelvic	1
Abscess, Broad Ligament	2
" Pelvic	5
" Tube and Ovary	2
Salpingo-oöphoritis	36
Thrombosis, Broad Ligament	2
Parametritis	5
Peritonitis, Tuberculous	2
Carcinoma, Ovarian	2

APPENDIX II.

Operations Performed in the Treatment of the Foregoing Cases.

Removal Secundines	31
Manual Removal of Placenta	1
Forceps, Low	10
" Medium	11
" High	3
Breech Extraction	8
Version and Extraction	7
Induction of Labor	1
Accouchment Force	6
Pubiotomy	1
Vaginal Hysterotomy	5
Craniotomy	5
Cæsarean Section	4
Cæsarean Section with Hysterectomy	2
Hysterectomy Ruptured Uterus	1
Dilatation and Curettage	39
Excision Bartholin's Gland	1
" Vaginal Polyp	1
Anterior Colporrhaphy	15
Perineorrhaphy	28
Repair Complete Tear	4
Cauterization of Cervix	1
Excision Cervical Polyp	3
Amputation of Cervix	4
Trachelorrhaphy	10
Suspension (Round Ligament)	14
Ventral Suspension	2
" Fixation	6
Plication Uterosacral Ligaments	1
Supravaginal Hysterectomy	18
Panhysterectomy	1
Myomectomy	1
Supravaginal Hysteromyomectomy	11
Panhysteromyomectomy	1
Panhysterectomy (Wertheim)	2
Salpingectomy (Unilateral)	9
Salpingectomy (Bilateral)	24
Salpingo-oöphorectomy (Unilateral)	11
Salpingo-oöphorectomy (Bilateral)	11
Oöphorectomy	13
Excision Ovarian Cyst	7
" Parovarian Cyst	2
" Carcinoma of Ovary	1
Drainage Abscess Broad Ligament	1
Excision Thrombosed Broad Ligament	1
Excision of Mesenteric Cyst	1
Appendectomy	27
Hemorrhoidectomy	1
Drainage Post-operative Sinus	1
Pelvic Puncture	6
Plastic on Urethra	1
Transfusion (indirect)	2

APPENDIX III.

Summary of New Born Infants.

Infants Born Alive	340
Still Births	24

Cause of Infant Deaths.

(Including stillbirths and deaths within the first two weeks of life.)

Birth Injuries	8
Syphilis	4
Placental Bacteremia	4
Pneumonia	3
Hydrocephalus	1
Maternal Toxæmia (Eclampsia)	5
Placenta Prævia	2
Premature Separation Placenta	2
Prolapse of Cord	1
Cause Unknown	8

APPENDIX IV.

Summary of Adult Admissions and of Births.

		Discharged			
Admissions	Well	Improved	Unimproved	Transferred	Died
628	530	66	7	11	14

Number of Births	At Term	Pre-mature	Infant Deaths At Term	Pre-mature	Total
364	340	24	22	16	38

Adult Deaths.

Inoperable Uterine Cancer	3
Pelvic Abscess: Peritonitis	2
Acute Salpingitis: Peritonitis	2
Post-operative Pneumonia	1
Eclampsia	3
Ruptured Uterus	1
Pneumonia during Pregnancy	1
Puerperal Peritonitis	1