

Te Linde's
Operative Gynecology

Richard F. Mattingly, M.D.

Fifth Edition

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Fifth Edition



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Preface

The continued advances in new knowledge and technical skills require that such a textbook as **OPERATIVE GYNECOLOGY** undergo frequent revision and updating. When this author joined Richard W. Te Linde in 1970 in revising the fourth edition, the commitment was made to continue this work which has its roots in the Johns Hopkins approach to gynecologic surgery. The publication of the fifth edition documents this commitment and sets the stage for subsequent editions.

The discipline of gynecology has changed in the past decade, with division of the field into several special areas of interest. As a result, the subspecialties of gynecologic oncology and reproductive endocrinology have emerged from our midst with fellowship training requirements and specialty boards in each. Special-interest groups have organized to form societies concerned with such developing areas as colposcopy, laparoscopy, immunology, gynecologic oncology, fertility, and vulvar disease, to name but a few. Many consider these changes as a mark of scientific progress within the specialty, while others view these changes as a part of a retrogressive superspecialization that is ongoing in medical education. These changes have channeled the clinical practice and competence of many gynecologists into more narrowed areas of clinical interest. Although the practice of gynecology may have been less complicated 25 years ago when the field was more unified, the explosion in medical knowledge has been the impetus for change.

In view of these facts, and to make certain that the broadest source of information is included within the current text, we have enlarged our circle of contributors to include some of our close academic colleagues in Baltimore and Milwaukee who have joined us in presenting a more complete coverage of the clinical problems related to the

field. An effort has been made to present a balanced view of the more significant medical complications that may influence the outcome of pelvic surgery far more importantly than the surgical skills and expertise of the gynecologist. For indeed, is there any advantage to a trusting patient in whether she succumbs to an advanced pelvic disease or becomes a surgical mortality statistic as a result of a predictable complication? One of the goals of this revised edition has been to identify these important areas of medical and surgical conflict.

The reader will find many new contributions to the fifth edition which update this work to the current interests and needs of the pelvic surgeon.

One of the most challenging developments that has occurred in the surgical field during the past decade has been in the area of medical-surgical malpractice. These problems are explored in detail in a new chapter, "Medicolegal Aspects of Pelvic Surgery," in which the surgeon's hand is guided by an awareness of the issues that are prevalent in this litigious period. The problems of the informed-consent are explored in detail.

For the first time in this text, a chapter on pelvic anatomy has been written to coordinate the anatomic relationships of the female pelvis with the technical aspects of various surgical procedures. This functional description of pelvic anatomy highlights the important areas of the pelvis where surgical complications can occur. Among the more important components of this extensively illustrated section of the book is a detailed discussion of the collateral arterial circulation of the pelvis and the surgical methods of controlling operative hemorrhage when this complication should occur. Important areas are illustrated where operative injuries to the urinary tract and bowel occur. A thorough understanding of the muscular, vascular, and

neurological relationships of the pelvic viscera is emphasized as a prerequisite for the successful outcome to pelvic surgery.

An appreciation of fluid and electrolyte metabolism has contributed significantly to the continued improvement in gynecologic surgery, and is recognized as an essential component of a surgeon's clinical skills. While some may find the revised material on this subject to be somewhat heavy reading, an understanding of these advances is vital for the postoperative care of the surgical patient. The use of low-dose heparin for surgically high-risk patients is discussed in detail.

The nutritional management of the seriously ill patient is presented in a new chapter on hyperalimentation, which provides a variety of methods and indications that are used currently for the nutritionally deficient patient who requires pelvic surgery. The preoperative preparation of the chronically ill patient with proper nutritional supplementation has broadened the physiologic limits within which surgery can be used successfully and has decreased the risks of serious postoperative complications.

The demands on the gynecologic surgeon have increased precipitously for improved surgical techniques in tubal surgery. The changing mores of a mobile and liberated society have increased the need for surgical precision in both tubal sterilization and reconstructive surgery on the oviduct. The decreased birth rate and liberalization of laws governing elective abortions have limited the possibility of adoption for the infertile couple and have reemphasized the importance of successful surgical techniques in tubal reconstructive surgery. The newer methods of tubal anastomosis and reimplantation are discussed and illustrated in a completely revised chapter on tubal surgery that also includes the various operative techniques for sterilization.

Endoscopy has become one of the most frequently utilized operative procedures of the past decade, due mainly to the use of laparoscopy in tubal cauterization. The subject of laparoscopy has nearly replaced the gynecologist's former interest in culdoscopy. This fact is evident in the new chapter on laparoscopy, which thoroughly discusses its indications, operative technique, and complications. Although the chapter on culdoscopy has been deleted from this edition, reflecting the current preference of the abdominal rather than the cul-de-sac view of the reproductive tract, this field is changing rapidly as are the endoscopic instruments for this procedure. The Johns Hopkins experience with the

laparoscope is included in a new contribution to this edition.

At the risk of detracting from the historical value of this surgical text, many of the surgical procedures and time-honored techniques that are no longer in use have been replaced by more current operative techniques. Silver wire sutures are no longer required for the successful closure of vesicovaginal and rectovaginal fistulas. A paradoxical incision of the anal sphincter has been replaced by a more complete plication of the levator ani muscles in reconstructing the anal canal and sphincter in cases of anal incontinence. The Richardson composite operation has been replaced by the vaginal hysterectomy with appropriate plication and closure of the cul-de-sac. At the request of many faithful readers of this text, a revised section on ventral hernias has been newly illustrated and replaced in this edition. The appropriate use of colposcopy in defining the epithelial changes and clinical significance of the abnormal vaginal cytologic smear is discussed and illustrated in relation to the place of conization of the cervix in the detection of early cervical cancer. The changing role of ultraradical (exenterative) pelvic surgery is clearly emphasized as a sequella of advances in megavoltage irradiation and the infrequency of central pelvic recurrence of cervical carcinoma. The use of pelvic surgery in the treatment of early and advanced cancer of the reproductive tract is correlated with the prognostic factors that influence the curability of the disease. The historic debate about the value of primary surgery versus irradiation treatment of invasive carcinoma of the cervix has been silenced by the recognized fact that there are clear indications for the use of both therapeutic modalities. Immediate hysterectomy following intracavitary irradiation has replaced a former six-week delay in the combined treatment of endometrial carcinoma.

The close embryologic and anatomic relationships of the lower urinary tract are reemphasized in a new chapter, "Female Urology in Relationship to Gynecology." Here, the historic origin of female urology as a component of gynecologic training at Johns Hopkins is re-examined, and the current use of cystoscopy in evaluating patients with urinary incontinence, pelvic infection, and malignancy is presented. The use of the carbon dioxide urethroscope and cystoscope is reviewed in evaluating the urethra and bladder, including the assessment of urethral pressures in cases of urinary incontinence. This modern office procedure has heightened the gynecologist's interest in performing a more

thorough study of the bladder and urethra before definitive surgery is undertaken for urinary symptoms and for the treatment of pelvic cancer.

If the reader should sense an unsteadiness of pen which accompanies the transition in authorship of the fifth edition, he will only partially understand the admiration and gratitude which I and thousands of gynecologists and grateful patients throughout the world share for Richard Wesley Te Linde and

for the wisdom and counsel he has given to pelvic surgeons during his professional career. For those of us who have stood closely in his shadow and have inherited his philosophy of gynecologic surgery, his words and guidance will provide the framework for the present and future editions of Te Linde's OPERATIVE GYNECOLOGY.

RICHARD F. MATTINGLY, M.D.

Foreword

More than seven years have passed since the appearance of the fourth edition of this book and more than thirty since the first edition. The demand for the volume has persisted, and it was the opinion of the authors and publishers that a fifth edition should be written. I hope there will be many editions to follow the present one and wish my esteemed student and colleague, Dr. Mattingly, success in the future.

As I look back on the days of the first edition, I marvel that I had the audacity to write every word of it. But life was simpler in those days, and so was gynecology. From my daily contact with office patients, it is obvious that a greater part of present-day gynecology has to do with social problems. The new morals, or lack of morals, have presented new problems. Also, the question of over-population and the accompanying food shortage have thrust these problems directly into the lap of gynecologists. The present edition deals with methods of sterilization and abortion as they exist under today's laws. In spite of these changes, the subject of pelvic surgery is as important as ever to the woman who must be subjected to it. A well-executed operation can restore health and happiness to the patient, whereas a bungled job can ruin her remaining years.

The problems of pelvic surgery have become increasingly multifaceted, and the best authority on the various phases can not be found in one gynecologist. Hence, several authorities have been called upon to deal with the various phases of the specialty. It is probable that future editions will be the work of even more contributors. As an example, the subject of malpractice has become foremost in every practitioner's mind. Dr. Sidney Shindell, a doctor of great experience in medicolegal matters, has been asked to contribute a chapter on this im-

portant phase of gynecology. Whereas formerly we seldom gave thought to malpractice, now we must consider every patient who walks into our office as a potential malpractice case. As offensive as this is, it may ultimately be of some value in improving the quality of gynecology and the bettering of service to womankind. As an example, for many years it has been apparent to me that the indications for hysterectomy have been too light in the hands of many pelvic surgeons. Many years ago I wrote a paper on this subject, only to receive several letters of protest from gynecologists, some of whom were considered of high rank nationally. One great reason for unnecessary pelvic surgery is a lack of knowledge of pathology on the part of the operator. For that reason, the various editions of OPERATIVE GYNECOLOGY have dealt not only with technique but also with pathology and indications for surgery. Unfortunately, it must be admitted with some embarrassment on the part of our profession that personal financial gain is a factor in the decisions of some operators in favor of borderline surgical indications.

In addition to unnecessary pelvic surgery, there is at times incomplete surgery for pelvic malignancy. For that reason, this volume includes the techniques for the more radical procedures. My quarrel with the overenthusiastic advocates of radical pelvic surgery is chiefly on the subject of indications. The prospects of cure should be carefully evaluated each time such surgery is contemplated. An extensive pelvic exenteration for malignancy which will require six months for recuperation and extend life for another six months of misery is in no way doing the patient a favor. Nonetheless, a well-executed radical procedure done on proper indications will on occasion give a patient a prolongation of happy,

comfortable life. Nowhere in surgery is there a greater place for careful and mature judgment as in selecting these cases for surgery.

Finally, I should like to repeat the words of J. M. T. Finney, Sr., who when considering the reasons for surgery said, "Surgery is done for three indica-

tions: to save life, to relieve suffering, and to correct deformity." If one can not justify his contemplated procedure on one or more of these indications, he should take another long, hard look.

RICHARD W. TE LINDE, M.D.

Foreword

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Preface to the First Edition

Gynecology has become a many-sided specialty. No longer is it simply a branch of general surgery. In order to practice this specialty in its broad sense, the gynecologist must be trained in a comprehensive field. He must be a surgeon, expert in his special field; he must be trained in the fundamentals of obstetrics; he must have the technical skill to investigate female urologic conditions; he must have an understanding of endocrinology as it applies to gynecology; he should be well grounded in gynecologic pathology; finally, he must be able to recognize and deal successfully with minor psychiatric problems which arise so commonly among gynecologic patients. With this concept of the specialty in mind this book has been written. It then becomes apparent, when one seeks training in gynecology beyond the simplest fundamentals such as are taught to undergraduates, that special works are necessary for training those who intend to practice it.

More and more this modern conception of gynecology is becoming apparent in the newer works that are appearing in the subject. Within the past decade books on gynecologic endocrinology, medical gynecology, as well as general textbooks on gynecology, have made their appearance. These volumes have been eagerly received, but there seemed to be a void in the books available for training young men in the field of gynecologic surgery. The author has attempted to fill this void with the present volume.

In the early days of the development of gynecology, progress in surgery was rapid and brilliant. Much of this has been recorded in Kelly's "Operative Gynecology." Since these pioneer days, progress has been slow, but there has been advance in surgical technic, in the development of new operations, in the improvement in anesthesia, and in the

pre- and the postoperative care of patients. Within the surgical lifetime of the author, which extends for a quarter of a century, operative mortality and morbidity have been greatly reduced as a result of improvements in these fields. Brilliant discoveries have been few, but the sum total of the minor advances add up to surprising progress.

The present volume attempts to bring the subject of operative gynecology up to date and to make recent information on that subject available in a single volume. The views expressed are those of the author and, in general, those which are put into practice on the gynecologic house service at the Johns Hopkins Hospital. On a service where many attending gynecologists work, differences of opinion are inevitable, and the author's views in this book are not held uniformly by all the attending gynecologists. Indeed, the differences in point of view expressed by the visiting staff are of value to the members of the house staff, causing them to realize early in their careers that all is not forever settled in medicine.

The author is a firm believer in the system of long hospital residencies for training young men in the various surgical specialties when their minds are quick to grasp ideas and their fingers are nimble. This volume has been written particularly for this group of men. Unfortunately, there is a paucity of good gynecologic residencies in the United States in the sense that the author has in mind. Many positions bear the name of residency but fail to give the resident sufficient operative work to justify the name. Another excellent method of development of the young gynecologist is an active assistantship to a well-trained, mature gynecologist. If the assistant is permitted to stand at the operating table opposite his chief, day after day, eventually he will acquire skill and judgment which he himself will be able to

utilize as an operator. When such a preceptor system is practiced, it is important that the assistant be given some surgery of his own to do while he is still young. If a man is forced to think of himself only as a perennial assistant, this frame of mind will kill his ability to accept responsibility of his own. However, many must learn their operative gynecology under less favorable circumstances than those of the fortunate resident or assistant. This volume should be of value to those who, by self-instruction, must acquire a certain degree of operative skill. Finally, it must be admitted that more gynecology is practiced today by general surgeons in this country than by gynecologists. Although this is not ideal, circumstances make it necessary, and much of this gynecologic surgery is well done. It is hoped that many general surgeons will use this volume as a reference book.

In connection with general surgery, it is only fair to say that much has come to gynecology by way of general surgeons of the old school, who practiced general surgery in the broadest sense. Now that gynecology and/or obstetrics has become a specialty unto itself, it is well in our training of men not to swing too far from general abdominal surgery. In spite of the most careful preoperative investigation, mistakes in diagnosis will be made, and at times the gynecologist will be called upon to take care of general surgical conditions in the region of lower abdomen and the rectum. With this in mind, the author has included in this volume a consideration of a few of the commoner general surgical conditions occasionally encountered incidentally with gynecology or by mistaken diagnosis.

Operative Gynecology is written with the primary purpose of describing the technic of the usual and some of the rarer operative procedures. It also includes indications for and against operations as well as pre- and postoperative care of patients. Although gynecology is divided into several fields, these fields interlock so that it has been found impossible to compose a volume on gynecologic surgery to the exclusion of the other divisions of the specialty. Gynecologic pathology, for instance, is the bedrock upon which good gynecologic surgery is practiced. Without an understanding of it, surgery becomes merely a mechanical job, and errors in surgical judgment are inevitable. Hence, it has become necessary to include in this volume a minimum of gross and microscopic pathology, as it applies directly to the surgical subject under consideration. Also, some consideration is given to

psychology and psychiatry in relation to gynecologic surgery. The author believes that getting the young woman on whom a hysterectomy must be done into the proper frame of mind to accept it is as important as possessing the technical skill to perform the operation.

The nature of this book has made it essential that it be well illustrated. With few exceptions, the illustrations were sketched at the operating table. The principal illustrator is James Didusch. Without the use of his talents the book could not have been produced. In addition, other excellent medical illustrators have contributed to the volume. These are the late Max Brödel, P. D. Malone, Mrs. Elinor Widmont Bodian, Miss Ranice Birch, William Didusch and Mrs. Grace Elam. The author is grateful to all of them, and the illustrations themselves speak for the quality of their work.

The author is grateful to Dr. Houston S. Everett, who has read the manuscript and made many valuable suggestions. This volume was written during the period of World War II, when the added burden of work caused by a reduced staff would have made the writing of the book impossible except for the co-operation of the resident staff. The resident gynecologists during that period, Dr. Donald Woodruff, Dr. Edward H. Richardson, Jr., Dr. Roger B. Scott, Dr. Gerald A. Galvin, Dr. Constantino Manahan and Dr. David Cheek, have performed several of the operations portrayed and have been helpful in criticizing the sketches. Dr. Charles B. Brack and Dr. George Farber prepared the sections relating to irradiation.

Mrs. Christine Nisbet has read the manuscript and given innumerable valuable suggestions in respect to literary style.

Much of the typing was done by Mrs. Gerald Hopkins, one of the many volunteers during the war period who have made it possible to keep the hospital open. I am grateful to my secretaries, Miss Margaret A. King, Miss Elizabeth Wood, Miss Grace F. Koppelman and Miss Bertha M. Scroggs, for their assistance in typing and looking up references. Dr. Lois Fess has also been helpful in searching the literature.

Finally, E. W. Bacon at the J. B. Lippincott Company has contributed generously from his store of practical knowledge acquired by a lifetime of experience in publishing medical works.

RICHARD W. TE LINDE
Baltimore, Maryland, 1946

4. Preoperative Care and Complications (continued)

Preoperative Medical Complications	53
Evaluation of the Gynecologic Patient with Heart Disease • <i>Michael H. Keelan, Jr., M.D.</i>	53
Pulmonary Complications • <i>Donald P. Schlueter, M.D.</i>	57
Preanesthetic Medication	63
Preparation of the Patient for the Operation	64
Preoperative Procedures in the Operating Suite	65
Armamentarium	65

5. Postoperative Care and Complications 69

Immediate Postoperative Care	69
Cardiac Complications	69
Hemorrhagic Shock	73
Pulmonary Complications • <i>Donald P. Schleuter, M.D.</i>	81
Urinary Output and Postoperative Fluid Needs	82
Estrogen Replacement Therapy	83
Care of the Gastrointestinal Tract	86
Postoperative Care of the Urinary Bladder	87
Venous Thrombosis and Thrombophlebitis	89
Deep Venous Thrombosis	94
Pulmonary Embolus	95

6. Hyperalimentation • James H. Woods, M.D., and Jerome J. DeCosse, M.D. 101

Purpose of Hyperalimentation	101
Indications for Intravenous Hyperalimentation	102
Mechanics of Administration	103
Placement of Central Venous Catheter	104
Complications of Intravenous Hyperalimentation	104
Isotonic Solutions	105
Renal Failure and Hyperalimentation	106
Cancer Therapy and Hyperalimentation	107
Enteral Nutrition	107

7. Water, Electrolyte, and Acid-Base Metabolism

<i>Lee A. Hebert, M.D., and Jacob Lemann, Jr., M.D.</i>	109
Regulation of the Internal Distribution of Water and Electrolytes	109
Regulation of Sodium and Water Exchanges with the External Environment	113
Clinical Assessment of Disorders of Water and Electrolyte Metabolism	116
Approach to Clinical Assessment of Disorders of ECF Composition (Sodium and Water) ...	120
Management of Water and Electrolyte Balance	125
Planning Maintenance of Fluid and Electrolyte Therapy	129
Nutrition	129
Potassium Metabolism	130
Acid-Base Metabolism	134

Part Three**Operations for Non-neoplastic Conditions**

8. Female Urology and Gynecology • Lawrence R. Wharton, Jr., M.D.	143
Embryology	143

Clinical Associations	144
Urologic Diagnosis	146
Urologic Evaluation	146
Cystoscopy	147
Urinary Tract Infections.....	153
Gas Endoscopy with Urethral and Bladder Pressure Studies • <i>Jack R. Robertson, M.D.</i>	154
9. Opening and Closing the Abdomen.....	161
Opening the Abdomen	161
Closing the Abdomen	170
Infections.....	175
Dehiscence.....	176
Incisional Hernia.....	179
10. Myomata Uteri.....	187
General Considerations	187
Asymptomatic Myomata	190
Signs and Symptoms Indicating Treatment	191
Choice of Treatment.....	194
Total vs. Subtotal Abdominal Hysterectomy for Benign Conditions of the Uterus.....	195
Ovarian Management at Hysterectomy for Benign Disease	196
Total Abdominal Hysterectomy for Benign Disease, Technique	199
Subtotal Hysterectomy, Technique	209
Injury to the Bladder	211
Posthysterectomy Hemorrhage	213
Postoperative Infection	214
Deaths from Hysterectomy	216
Posthysterectomy Granulation Tissue of the Vaginal Vault.....	216
Abdominal Myomectomy	216
11. Endometriosis • <i>Lawrence R. Wharton, Jr., M.D.</i>	223
Adenomyosis	223
External Endometriosis	226
Treatment	245
Malignancy in Endometriosis	250
12. Presacral Neurectomy.....	253
General Considerations	253
Anatomy	254
Location of Pain in Selection of Patients	256
Technique of Presacral Neurectomy.....	256
13. Pelvic Inflammatory Disease and Its Sequelae	259
Gonococcal Infections	259
Surgical Treatment of Acute Pelvic Infections.....	262
Pelvic Infections Following Gynecologic Surgery.....	264
Necrotizing Fasciitis Following Pelvic Surgery	265
Surgery for Chronic Pelvic Inflammatory Disease	266
Septic Shock.....	278
Tuberculosis of the Female Genital Tract.....	283

14. Operative Injuries of the Ureters	291
Embryology, Anatomy, and Blood Supply of the Ureters	291
Injury to the Ureter	293
Treatment of Operative Ureteral Injuries	295
Ureteroureteral Anastomosis	300
Submucosal Tunnel Ureteral Implantation	301
Direct Implantation of the Ureter into the Bladder	303
Ureterovesical Anastomosis of the "Short Ureter"	305
Results of Ureteral Plastic Surgery	306
15. Surgery of the Double Uterus • Howard W. Jones, Jr., M.D.	309
Indications for Surgery	309
Surgery for Hematometra	312
Surgery for History of Habitual Abortion	314
Surgical Technique	316
Surgery for Other Conditions	317
16. Surgical Conditions of the Fallopian Tube	321
Tubal Factors in Infertility	321
Special Diagnostic Studies	321
Nonoperative Treatment for Infertility	323
Operative Treatment for Infertility	324
Recent Developments in Tubal Surgery	336
Fertility Control	336
Optimum Time for Sterilization	337
Medicolegal Aspects of Sterilization	338
Methods and Efficacy of Tubal Sterilization	338
Sequelae of Tubal Sterilization	346
17. Laparoscopy • Clifford R. Wheelless, M.D.	349
History of Laparoscopy	349
Equipment for Laparoscopy	349
Sterilization of Laparoscopy Instruments	352
Indications for Laparoscopy	353
Contraindications to Laparoscopy	354
Preparation of the Patient	355
Anesthesia	355
Positioning of the Patient	355
Techniques of Laparoscopy	356
Surgical Sterilization Technique	357
Silastic Band Technique for Tubal Sterilization	358
Control of Hemorrhage	359
Removal of Intraperitoneal Foreign Bodies	360
Complications of Laparoscopy	361
Sterilization Failures	364
18. Ectopic Pregnancy	367
Epidemiology	367
Etiology	367
Sites of Extrauterine Pregnancy	369
Effect of Ectopic Pregnancy on Future Reproduction	369

Diagnosis.....	370
Treatment for Ectopic Pregnancy.....	373
Technique of Salpingectomy for Tubal Pregnancy.....	375
Conservative Surgical Treatment.....	376
Interstitial Pregnancy.....	376
Treatment for Interstitial Pregnancy.....	377
Technique of Excision of Interstitial Pregnancy.....	377
Ovarian Pregnancy.....	378
Abdominal Pregnancy.....	379
Other Forms of Ectopic Pregnancy.....	380
19. The Intestinal Tract in Relation to Gynecology	
<i>Larry C. Carey, M.D., and Philip W. Catalano, M.D.</i>	385
Postoperative Complications Involving the Gastrointestinal Tract.....	385
Primary Gastrointestinal Disease Mimicking Acute Gynecologic Disorders.....	389
Primary Gastrointestinal Disease Encountered During Gynecologic Surgery.....	390
Primary Gynecologic Diseases Affecting the Gastrointestinal Tract.....	391
Surgery of the Anus and Rectum.....	397
20. The Vermiform Appendix in Relation to Gynecology	407
Treatment of Acute Appendicitis.....	408
Technique of Appendectomy.....	409
Appendicitis in Pregnancy.....	409
21. Dilatation of the Cervix and Curettage of the Uterus	415
Normal Menstrual Physiology.....	415
Dysfunctional Uterine Bleeding.....	416
Dilatation of the Cervix.....	418
Curettage of the Uterus.....	420
Outpatient Curettage.....	425
22. Surgical Management of Reproductive Failure and Abortion	
<i>Eleanor Delfs, M.D., and K. Paul Katayama, M.D., Ph.D.</i>	429
Terminology.....	429
Habitual Abortion.....	429
Treatment of Spontaneous Abortions—Threatened, Inevitable, Incomplete, and Complete.....	437
Therapeutic Abortion.....	439
Elective Abortion.....	440
Techniques of Pregnancy Termination.....	440
Septic Abortion.....	448
Perforation of the Pregnant Uterus.....	448
23. Surgical Conditions of the Vagina and Urethra	453
<i>Part I: Vagina</i>	453
Embryology.....	453
Congenital Absence of Vagina.....	454
Transverse Vaginal Septum.....	462
Imperforate Hymen and Its Complications.....	463
Carcinoma of the Vagina.....	466

23. Surgical Conditions of the Vagina and Urethra (continued)

Part 2: Urethra	471
Infection.....	471
Cysts of Skene's Duct	476
Senile Changes	476
Carcinoma of the Urethra.....	479

24. Malpositions of the Uterus, Cervical Stump, and Vagina..... 485

Retrôdisplacement of Uterus.....	485
Prolapse of Uterus	493
Le Forte Operation.....	516
Complete Colpocleisis for Prolapse of Vagina Following Total Hysterectomy	523
Abdominal Suspension of Prolapsed Vagina	524
Use of Fascia Lata or Mersilene Strap in Vaginal Prolapse	524

25. Stress Urinary Incontinence, Urethrocele, and Cystocele..... 531

Physiology of Urination	531
Urethral Pressure Studies.....	532
Factors Influencing Stress Urinary Incontinence.....	533
Treatment of Stress Incontinence of Urine	535
Operation for Cystourethrocele and Kelly Urethral Plication	540
Repair of Cystocele.....	549

26. Urinary Incontinence Not Curable by Sphincter Plication • John H. Ridley, M.D. 551

Historical Development of Operative Procedures.....	551
Choice of Operation	553
Preoperative Evaluation of the Bladder.....	555
Operative Procedures	557
Postoperative Care.....	568
Results.....	570
Analysis of Failures and Complications.....	571

27. Vesicovaginal and Urethrovaginal Fistulas 573

History	573
Etiology	574
Symptoms and Diagnosis.....	574
Treatment of Vesicovaginal Fistulas	576
Urethrovaginal Fistulas	583
Urinary Diversion.....	590

28. Relaxed Vaginal Outlet, Rectocele and Enterocoele..... 597

Anatomic Considerations.....	597
Symptoms of Relaxed Vaginal Outlet and Rectocele	600
Repair of Relaxed Vaginal Outlet and Rectocele.....	600
Enterocoele	603
Technique of Repair of Enterocoele	608

29. Anal Incontinence and Rectovaginal Fistulas 611

Anatomy of the Anal Canal	611
Mechanism of Defecation.....	612

Mechanism of Anal Incontinence.....	613
Rectovaginal Fistulas	618

Part Four Treatment of Pelvic Neoplasms

30. Surgical Conditions of the Vulva	
<i>J. Donald Woodruff, M.D., and Richard F. Mattingly, M.D.</i>	629
Dermatologic Conditions of the Vulva	629
Trauma	631
Cysts of the Vulva	632
Solid Tumors	635
Varicocele and Varices	640
White Lesions of the Vulva	640
Paget's Disease	644
Carcinoma in Situ	647
Basal Cell Carcinoma of the Vulva.....	651
Invasive Carcinoma of the Vulva.....	653
Unusual Malignancies of the Vulvourethral Region	667
31. Cervical Intraepithelial Neoplasia	
<i>Adolf Stafl, M.D., and Richard F. Mattingly, M.D.</i>	671
Cervical Cancer Screening.....	671
Epidemiology of Cervical Cancer.....	674
Herpes Type 2 Virus	675
Pathological Features.....	676
Microscopic Picture.....	677
Relation of Dysplasia to Carcinoma in Situ.....	678
Relation of Carcinoma in Situ to Invasive Cancer.....	681
Diagnosis.....	686
Conization of the Cervix	689
Colposcopy.....	691
Treatment of Carcinoma in Situ.....	694
Treatment of Recurrences of Carcinoma in Situ	696
32. Invasive Carcinoma of the Cervix	699
Classification.....	699
Histopathology	701
Gross Pathology	704
Prognostic Factors	704
Treatment.....	707
Carcinoma of Cervix in Pregnancy	735
Microinvasive Carcinoma	738
Intestinal Complications of Irradiation Therapy • <i>Clifford R. Wheelless, M.D.</i>	742
33. Pelvic Exenteration	757
Indications.....	757
Contraindications	758
Operative Procedure.....	759
Urinary Diversion.....	760
Pelvic Lymphadenectomy.....	765