

英文原版

妇科手术图谱

Atlas of Gynecologic Surgery

DONALD R. OSTERGARD, M.D.

MICHAEL L. BERMAN, M.D.

BILL YEE, M.D.



人民卫生出版社



HEALTH SCIENCE ASIA,
ELSEVIER SCIENCE

ATLAS OF GYNECOLOGIC SURGERY

Donald R. Ostergard, M.D.

*Professor of Obstetrics and Gynecology
University of California, Irvine
College of Medicine
Associate Medical Director of Gynecology
Women's Hospital
Long Beach, California*

Michael L. Berman, M.D.

*Professor, Division of Gynecological Oncology
Department of Obstetrics and Gynecology
University of California, Irvine
College of Medicine
Long Beach, California*

Bill Yee, M.D.

*Associate Clinical Professor
Division of Reproductive Endocrinology and Infertility
Department of Obstetrics and Gynecology
University of California, Irvine
College of Medicine
Director of In-Vitro Fertilization
Women's Hospital
Long Beach, California*



人民卫生出版社

Health Science Asia, Elsevier Science

人民卫生出版社

Health Science Asia, Elsevier Science

Atlas of Gynecologic Surgery

Original English Language Edition

Copyright © 2000 by W. B. Saunders Company

All Rights Reserved.

Authorized English Reprints

Copyrights © 2002 by Health Sciences Asia, Elsevier Science.

图书在版编目(CIP)数据

妇科手术图谱 / (美) 奥斯特加德(Ostergard, D.R.)

编著. —影印版. —北京: 人民卫生出版社, 2002

ISBN 7-117-04821-2

I. 妇… II. 奥… III. 妇科外科手术—图谱—英文
IV. R713.64

中国版本图书馆 CIP 数据核字 (2002) 第 020931 号

图字: 01-2002-1958

妇 科 手 术 图 谱(英文版)

原 著: Donald R. Ostergard 等

出版发行: 人民卫生出版社(中继线 67616688)

地 址: (100078)北京市丰台区方庄芳群园 3 区 3 号楼

网 址: [http://www. pmph. com](http://www.pmph.com)

E - mail: [pmph @ pmph. com](mailto:pmph@pmph.com)

印 刷: 北京人卫印刷厂

经 销: 新华书店

开 本: 889×1194 1/16 印张: 43

字 数: 1314 千字

版 次: 2002 年 8 月第 1 版 2002 年 8 月第 1 版第 1 次印刷

标准书号: ISBN 7-117-04821-2/R·4822

定 价: 181.00 元

著作权所有, 请勿擅自用本书制作各类出版物, 违者必究
(凡属质量问题请与本社发行部联系退换)

There are many who experience the obligations of those of us in academic medicine. The hours are long and our loved ones may not get the time and attention they deserve while we pursue our tasks in the preparation of a text such as this. I especially want to thank my wife who always gives unselfishly of herself and doesn't complain when I have "things to do." My dedication goes exclusively to her, Constance, my friend, companion, and partner in life.

Donald R. Ostergard, M.D.

To my patients, who honor me by entrusting their lives to me and who teach me daily the meaning of dignity in the face of adversity, and to my family who selflessly lend me to my patients, fellows, and residents.

Michael L. Berman, M.D.

This book is dedicated to my daughters, Dana and Kasey, my pride and joy.

Bill Yee, M.D.

ACKNOWLEDGMENTS

The preparation of a text of this magnitude involves many individuals who play a role in its creation. We are especially proud of our illustrators, Carol Beckerman who headed the group of illustrators and who did most of the finished art and Jim Dowdells who did the rough sketches and spent a lot of time with us in the operating room. On the administrative side Bill Schmitt was always at the ready to discuss budget, timing, and deadlines along with words of encouragement and sympathy as the time for the project stretched from 2 years to much longer. Tony Caruso has done a great job in coordinating the layout of the text. We are grateful to all of these individuals for their dedicated roles in this project.

PREFACE

As all of us welcome the new millenium we are caught up in a rapidly expanding world with excess information available to us in any facet of life that we may choose to explore. For physicians, the knowledge basis in medicine and other scientific fields are expanding exponentially. When we realize that 90% of all scientists who have ever lived are alive today, the reason for this observation is apparent. As physicians we must be selective in choosing what we read because the volume of relevant material exceeds that which we can possibly absorb. As a consequence the physician who knew all there was to know about medicine is an individual of the past. Increasingly we must practice in ever expanding medical fields to ensure that we provide the best care for our patients.

In other ways economic forces often beyond the control of physicians can influence how we practice medicine. Third party payers can affect almost every aspect of our interaction with patients through the myriad of rules which can prevent us from providing optimal patient care. Managed care often can delay necessary medical care and, at times, can adversely affect patient outcomes. It has become increasingly more difficult to “do well” for our patients despite our efforts to be an advocate for them and for optimal patient care. Often we are expected to provide assembly line type of medical care in order to meet managed care goals which will insure their profitability rather than insure a desired outcome.

Anything that simplifies our medical education is welcomed. To that end we, the authors of this textbook of gynecologic surgery, have set out to simplify surgery by creating a step by step procedural process, illustrated to emphasize those surgical steps which are critical to the individual procedure under consideration. We have provided “helpful hints” in an effort to aid the physician in reducing blood loss, minimizing complication rates, and improving their surgical skills. Commonly performed procedures are illustrated as well as those done rarely to the point that the typical gynecologic surgeon may never perform them. Nevertheless when the need arises, and the gynecologist has a patient who must undergo such a procedure, he or she will be better able to assist the experienced surgeon with this text serving as a source of basic information illustrating the surgical technique.

The book is organized into operations on the various organs within the purview of the gynecologist, beginning with the vulva and ending in the upper abdomen when radical cancer surgery is performed. Special sections are dedicated to patient positioning, types of incisions, and their closures along with suture choices. Local pain relief, types of hemostatic techniques, and the proper use of drains are illustrated. A special emphasis is placed on those special procedures utilized in the subspecialty of Urogynecology and Pelvic Reconstructive Surgery especially as it relates to incontinence of urine and feces and the various types of genital prolapse. New and promising proce-

dures are illustrated which may be more complex to perform but seem to offer a better success rate for our patients. Special procedures on the ureter, colon, and small bowel are included along with presentations of venous access procedures and other miscellaneous techniques utilized mostly in cancer surgery. Operative laparoscopic and hysteroscopic procedures complete the text.

We hope that the resident gynecologic surgeon will find this text useful as he or she prepares for a career in this area of medicine and begins to perform these procedures. We believe that the experienced gynecologic surgeon will also find this a useful reference with many new approaches and helpful hints for commonly performed operations.

Donald R. Ostergard, M.D.

Michael L. Berman, M.D.

Bill Yee, M.D.

INTRODUCTION

Gynecology was exclusively a medical discipline in America until well into the nineteenth century. Even after McDowell's seminal "ovariotomy" on Jane Crawford in 1809, surgical procedures were slow to be accepted. A full 50 years passed before gynecologic surgery was practiced commonly in America. At the close of the eighteenth century, none of the known common major gynecological operative procedures were known. Records from the New York Hospital revealed that from 1848 to 1851, not a single gynecologic surgical procedure was performed at that institution. Only at New York's Women's Hospital had gynecology achieved recognition as a surgical specialty, largely through the fistula repairs and vaginal plastic operations of J. Marion Sims and Thomas Addis Emmet. W. H. Byford in his presidential address before the American Medical Association in 1875, referred to enucleation of uterine fibroids as "so dangerous and difficult that it is not to be thought of except in desperate conditions."

Howard Kelly is widely regarded as having done more than any other American to establish gynecology as a surgical specialty in this country. In 1889, at the age of 31, he moved to Baltimore to become head of Gynecology at the newly established Johns Hopkins Hospital. Upon the opening of The Johns Hopkins Hospital, Kelly established the long-term residency program in Gynecology. It was an innovation in surgical training and a major contribution to the development of the specialty. Kelly served two decades as Chief of Gynecology at The Johns Hopkins Hospital and Professor of Gynecology in the Medical School. He was an innovative surgeon who contributed greatly to the new specialty of Gynecological Surgery through his surgical skills and prolific publications.

Kelly was succeeded by many distinguished surgeons in the field of gynecology, including Thomas Stephen Cullen. Cullen and Kelly published a textbook on *Management of Myomata of the Uterus* in 1909. They enlisted the assistance of Max Brödel, Professor of Anatomy, who had already achieved a national reputation as a medical artist through his illustrations in the writings of Kelly. His drawings are among the best ever drawn which describe various surgical procedures in the pelvis.

In 1927, in another area of the country, a surgeon by the name of Joe Vincent Meigs was appointed gynecologist to the Pondville State Cancer Hospital of Massachusetts and subsequently was made Director of Gynecology at the Massachusetts General Hospital. In 1942, he was made Clinical Professor of Gynecology at Harvard Medical School. Dr. Meigs is best known for advancing the field of Gynecologic Oncology through his perfection of the radical hysterectomy procedure. In the late 1940s he reported 100 cases of early cervical cancer treated by radical hysterectomy with a 5% mortality. It should be understood that this was prior to the development of antibiotics or blood transfusions.

In summary, the development of gynecologic surgery in the United States by the surgeons listed above and many others, was a milestone in American medicine. This textbook continues that tradition as three excellent technicians author this atlas contributing their long experience in their field. This atlas has been the product of thousands of hours of work on the part of the authors and the quality of the final product is reflective of their effect.

Philip J. DiSaia, M.D.

*The Dorothy Marsh Chair in Reproductive Biology
Professor, Department of Obstetrics and Gynecology*

CONTENTS

1 POSITIONING THE PATIENT FOR SURGERY 1

2 TYPES OF INCISIONS 5

- 2.1 Cherney Incision 6
- 2.2 Maylard Incision 10
- 2.3 Pfannenstiel Incision 12
- 2.4 Midline Incision 14
- 2.5 Paramedian Incision 15
- 2.6 Pararectus Muscle Incision 16
- 2.7 Chevron Incision 17
- 2.8 Midtransverse Abdominal Incision 18

3 ABDOMINAL WALL CLOSURES 23

- 3.1 Transverse Incisions 24
- 3.2 Vertical Incisions 26

4 SUTURE CHOICES 29

5 PAIN RELIEF 31

- 5.1 Marcaine Injection 32

6 HEMOSTASIS 33

- 6.1 Electrocautery 34
- 6.2 Argon Beam Coagulator 36
- 6.3 Thrombin and Gelfoam 37

- 6.4 Packing 38
- 6.5 Hemoclips 39
- 6.6 Clamp and Tie 40
- 6.7 Clamp and Suture 41

7 DRAINS 43

- 7.1 Suction Drains 45
- 7.2 Nonsuction Drains 46

8 VULVA 48

- 8.1 Vulvar Biopsy 48
- 8.2 Wide Local Excision 50
- 8.3 Laser Vaporization 52
- 8.4 Alcohol Injection 54
- 8.5 Labial Fusion Release 56
- 8.6 Hymenotomy 58
- 8.7 Bartholin's Gland, Incision and Drainage, and Marsupialization 60
- 8.8 Bartholin's Gland Excision 62
- 8.9 Schuchardt Incision 64
- 8.10 Vaginal Outlet Stenosis 66
- 8.11 Skinning Vulvectomy 68
- 8.12 Radical Vulvectomy and Bilateral Groin Dissection 76
- 8.13 Vulvar Closure with Z-plasty 94

9 INTROITUS AND ANUS 101

- 9.1 Vestibulectomy 102
- 9.2 Anal Sphincteroplasty 104
- 9.3 Urethral Hymenal Fusion Release 107

10	VAGINA	109
10.1	Biopsy	110
10.2	Anterior Colporrhaphy	112
10.3	Posterior Colporrhaphy	120
10.4	Sacrospinous Ligament Vaginal Vault Fixation	126
10.5	Sacral Colpopexy	138
10.6	Vaginal Enterocele Repair	148
10.7	Abdominal Enterocele Repair	154
10.8	Vaginal Evisceration	158
10.9	Excision of Vaginal Septum	162
10.10	Colpotomy	164
10.11	Vaginal Paravaginal Repair and Bilateral Sacrospinous Ligament Vaginal Vault Suspension	166
10.12	Abdominal Paravaginal Repair	182
10.13	Gartner's Duct Cyst Excision	186
10.14	Correction of Vaginal Stricture	190
10.15	Vaginal Myomectomy	192
10.16	Colpocleisis (Le Fort Procedure)	194
10.17	McIndoe Vaginoplasty	200
10.18	Rectovaginal Fistula Repair	206
10.19	Simple Vaginectomy	210

11	URETHRA/INCONTINENCE	215
11.1	Urethral Caruncle	216
11.2	Urethral Meatoplasty	218
11.3	Urethrovaginal Fistula with Martius Graft	220
11.4	Neourethra	224
11.5	Urethral Diverticulum	228
11.6	The Spence Procedure	236
11.7	Suburethral Sling Procedure	238
11.8	Marshall-Marchetti-Krantz (MMK) Retropubic Urethropexy	258
11.9	Burch Retropubic Urethropexy	260
11.10	Stamey Needle Urethropexy	270
11.11	Pereyra Procedure	272

11.12	Paraurethral Bulking Agent Injection	276
11.13	Vesicouterovaginal Fistula Repair	278

12	BLADDER	281
12.1	Cystotomy	282
12.2	Vesicovaginal Fistula Repair—Latzko Technique	284
12.3	Abdominal Vesicovaginal Fistula Repair	290
12.4	Bladder Pillar Block	293
12.5	Bladder Denervation	294

13	CERVIX	297
13.1	Cervical Biopsy and Endocervical Curettage	298
13.2	Cervical Cryosurgery	300
13.3	Cervical Conization	302
13.4	Cervical Laser Vaporization	308
13.5	Cervical Loop Electrical Excision	310
13.6	Incompetent Cervix Repair	312
13.7	Cervical Stump Excision	316

14	TUBES AND OVARIES	319
14.1	Salpingectomy	320
14.2	Salpingo-oophorectomy	322
14.3	Tubal Ligation Procedures	328
14.4	Tubal Fulguration for Sterilization	336
14.5	Ovarian Wedge Resection	338
14.6	Ovarian Cystectomy	340
14.7	Ovarian Transposition	343

15	UTERUS	347
15.1	Paracervical Block Anesthesia	348
15.2	Intracervical Anesthesia	349
15.3	Uterosacral Ligament Transection (Doyle Procedure)	350
15.4	Dilatation and Curettage: Diagnostic and for Pregnancy Termination	351
15.5	Uterine Perforation	355
15.6	Abdominal Myomectomy	357

15.7	Uterine Unification (Strassman Procedure)	359	18.6	Side-to-Side Stapler Technique	507
15.8	The Modified Manchester Procedure	362	18.7	Valtrac Technique for Colonic Anastomosis	509
15.9	Vaginal Cuff Closures	367	18.8	Resection of Transverse Colon and Omentum with Reanastomosis	511
15.10	Total Vaginal Hysterectomy	371	18.9	Surgical Management of Intestinal Injuries	520
15.11	Vaginal Hysterectomy with Morcellation and Myomectomy	391	18.10	End-to-Side Colorectal Anastomosis	529
15.12	Total Abdominal Hysterectomy	393			
15.13	Subtotal Abdominal Hysterectomy	404	19	SMALL BOWEL	533
15.14	Abdominal Hysterectomy: Intrafascial Technique	405	19.1	Bypass with Mucous Fistula	534
15.15	Abdominal Hysterectomy after Pelvic Inflammatory Disease	409	19.2	Bypass without Mucous Fistula	537
15.16	Modified Radical Hysterectomy	410	19.3	Feeding Jejunostomy/Baker Jejunostomy Tube Placement	542
15.17	Radical Abdominal Hysterectomy	420			
16	ABDOMINAL WALL PROCEDURES	435	20	EXTRAABDOMINAL PROCEDURES: VENOUS ACCESS	545
16.1	Incisional Hernia Repair	436	20.1	Groshong Catheter Placement	546
16.2	Abdominal Wall Dehiscence	439	20.2	Subclavian Port-a-Cath	552
17	URETER	443	21	ULTRARADICAL PELVIC OPERATION	553
17.1	Ureterolithectomy	444	21.1	Total Pelvic Exenteration	554
17.2	Ureteroureterostomy	447			
17.3	Ureteroneocystostomy	450	22	MISCELLANEOUS ABDOMINAL AND PELVIC PROCEDURES	573
17.4	Urinary Conduit (Intestinal)	459	22.1	Omental J-Flap	574
17.5	Indiana Pouch	466	22.2	Gastrostomy Tube Placement	578
18	COLON	481	22.3	Diaphragmatic Biopsy	581
18.1	Appendectomy	482	22.4	Peritoneal Port-a-Cath Insertion	584
18.2	Loop Transverse Colostomy	486	22.5	Omentectomy	586
18.3	Closure Loop Colostomy	491	22.6	TRAM Flap	589
18.4	End Colostomy with Hartmann Pouch	495	22.7	Resection of Pelvic Peritoneum	595
18.5	Colorectal Anastomosis—EEA Technique	502	22.8	Staging Laparotomy for Cervical Cancer	599
			22.9	Periaortic Lymphadenectomy	603

23 LAPAROSCOPY 609

- 23.1 Skin Incisions 610
- 23.2 Veress Needle Insertion 611
- 23.3 Trocar Positions 614
- 23.4 Fascial Closure 616
- 23.5 Accessory Instruments 617
- 23.6 Electrosurgical Principles 618
- 23.7 Sterilization—Coagulation 621
- 23.8 Sterilization—Bands 622
- 23.9 Sterilization—Clips 623
- 23.10 Biopsy with Accessory Instruments 624
- 23.11 Endometriosis Treatments 625
- 23.12 Control of Hemorrhage 628
- 23.13 Lysis of Adhesions 629
- 23.14 Ectopic Pregnancy—Salpingostomy 631
- 23.15 Ectopic Pregnancy—Salpingectomy 633

- 23.16 Ovarian Cystectomy 636
- 23.17 Oophorectomy 640
- 23.18 Myomectomy 643
- 23.19 Laparoscopy-Assisted Vaginal Hysterectomy 648
- 23.20 Laparoscopic Burch Procedure 654
- 23.21 Tubal Reanastomosis 659

24 HYSTEROSCOPY 663

- 24.1 Accessory Instruments 664
- 24.2 Lysis of Adhesions 665
- 24.3 Uterine Septum 666
- 24.4 Resection of Polyps and Myomas 669
- 24.5 Endometrial Ablation 670
- 24.6 Proximal Tubal Cannulation 672

INDEX 674

CHAPTER

1

POSITIONING THE PATIENT FOR SURGERY

Positioning the patient for surgery should accomplish several important goals that will facilitate the planned operative procedure by optimizing exposure of the operative field and physician comfort while avoiding injury to the patient.

Optimizing Exposure of the Operative Field

It is axiomatic that adequate exposure is essential for the safe performance of surgery; however, pelvic surgeons are notorious for operating through incisions that are smaller than optimal for the planned procedure. This problem is compounded by a common failure to maximize lighting conditions in the operating room.

When the surgeon operates through a low transverse or a vertical incision, the patient should be supine and the table in 10 to 15 degrees of Trendelenburg. This position will take advantage of gravity and helps to expose the pelvic structures unimpeded by loops of intestine in the operative field. The location of the operating table should be such that the overhead lighting is directly above the mid- to upper abdomen. The overhead lights then will be directed downward (caudad) into the pelvis. If lighting is inadequate despite good exposure, it should be augmented by employing auxiliary light sources. Readily available auxiliary light sources include headlamps and lighted suction devices (Vitalvue). When a vertical incision is made, it should extend caudad to the pubic symphysis. Difficult dissection deep in the pelvis often is facilitated merely by extending the skin and fascial incisions in this fashion.

The patient position for laparoscopy should be in a steeper Trendelenburg since gravity is the principle means by which pelvic exposure is achieved. In such instances, 20 to 30 degrees of Trendelenburg is useful. When laparoscopically assisted procedures are planned, a still steeper Trendelenburg is required. In such instances, the patient's arms should be by the sides rather than extended outward. This positioning will permit the surgeon greater mobility in performing pelvic and/or operative procedures. Laparoscopic positioning is also facilitated by careful attention to the positioning of the legs and thighs. Excessive flexion of the thighs can preclude optimal placement of trocars laterally in the distal abdomen.

When the surgeon is performing vaginal surgery the patient's buttocks should remain on the table while permitting placement of weighted retractors in the vagina without their touching the operating table. Care must be taken to avoid exaggerated flexion of the hips, especially in elderly patients as this can result in orthopedic or nerve injury. Furthermore, pressure points must be avoided on the calves and feet as this can result in neurological injuries to various branches of the sciatic nerve.

Finally, when performing a combined abdominal and vulvovaginal procedure, as in radical vulvectomy with groin dissection, one must achieve good exposure for both of these areas. The author prefers using different positions for the two parts of the operation, supine positioning for the groin dissection with the thighs abducted followed by repositioning and draping in the lithotomy position for the vulvectomy. As an alternative, one may employ a position similar to that for laparoscopy although with less exaggerated Trendelenburg positioning. This position is particularly helpful when planning a total pelvic exenteration or low rectal anastomosis as described elsewhere.

Not to be overlooked is the importance of ensuring physician comfort in the operating room. It is unlikely that one operates as well with discomfort from a table that is too high or too low or perhaps with armboards that displace the surgeon from the preferred location for optimal performance of the planned procedure. This is of particular note when performing procedures in the upper abdomen as required for many oncological operations. Finally, exposure can be maximized by optimal packing of the bowel from the pelvis and by using retractors, such as the Bookwalter retractor, designed to aid the surgeon performing extensive abdominal pelvic procedures.

Packing can be facilitated by placing rolled laparotomy tapes in both paracolic gutters prior to packing the colon and small bowel out of the pelvis. Familiarity with all of these approaches are important especially when facing unusually complicated procedures or managing bleeding complications of surgery.

