

Tips & Tricks in Operative Obstetrics & Gynecology



System requirement:

- Operating System - Windows Vista or above
- Web Browser – Google Chrome, Mozilla Firefox, Internet Explorer 9 and above
- Essential plugins – Java & Flash player
 - Facing problems in viewing content – it may be your system does not have java enabled.
 - If Videos don't show up – it may be the system requires Flash player or need to manage flash setting. To learn more about flash setting click on the link in the help section.
 - You can test java and flash by using the links from the help section of the CD/DVD.

Accompanying CD/DVD Rom is playable only in Computer and not in DVD player.

CD/DVD has Autorun function – it may take few seconds to load on your computer. If it does not works for you then follow the steps below to access the contents manually:

- Click on my computer
- Select the CD/DVD drive and click open/explore – this will show list of files in the CD/DVD
- Find and double click file – “launch.html”

For more information about troubleshoot of Autorun click on : <http://support.microsoft.com/kb/330135>

DVD Contents

- Case 1: Cervical Cancer
- Case 2: Dysfunctional Uterine Bleeding
- Case 3: Endometrial Cancer
- Case 4: Ovarian Cancer
- Case 5: Ectopic Pregnancy
- Case 6: Infertility
- Case 7: Congenital Malformations of the Uterus
- Case 8: Forceps Delivery
- Case 9: Ventouse Delivery
- Case 10: Previous Cesarean Section
- Case 11: Postpartum Hemorrhage
- Case 12: Shoulder Dystocia
- Case 13: Antenatal Screening
- Case 14: Recurrent Miscarriage
- Case 15: Missed Abortion
- Case 16: Fibroid Uterus
- Case 17: Cervical Intraepithelial Neoplasia
- Case 18: Chronic Pelvic Pain
- Case 19: Prolapse Uterus
- Case 20: Genitourinary Fistula

Tips & Tricks in Operative Obstetrics & Gynecology

Second Edition

Richa Saxena

MBBS MD (Obstetrics and Gynecology)
PG Diploma in Clinical Research
Obstetrician and Gynecologist
New Delhi, India



The Health Sciences Publisher

New Delhi | London | Philadelphia | Panama



JAYPEE Jaypee Brothers Medical Publishers (P) Ltd

Headquarters

Jaypee Brothers Medical Publishers (P) Ltd
4838/24, Ansari Road, Daryaganj
New Delhi 110 002, India
Phone: +91-11-43574357
Fax: +91-11-43574314
Email: jaypee@jaypeebrothers.com

Overseas Offices

J.P. Medical Ltd
83, Victoria Street, London
SW1H 0HW (UK)
Phone: +44-2031708910
Fax: +44(0)20 3008 6180
Email: info@jpmedpub.com

Jaypee-Highlights Medical Publishers Inc
City of Knowledge, Bld. 237, Clayton
Panama City, Panama
Phone: +1 507-301-0496
Fax: +1 507-301-0499
Email: cservice@jphmedical.com

Jaypee Medical Inc
The Bourse
111 South Independence Mall East
Suite 835, Philadelphia, PA 19106, USA
Phone: +1 267-519-9789
Email: jpmed.us@gmail.com

Jaypee Brothers Medical Publishers (P) Ltd
17/1-B Babar Road, Block-B, Shaymali
Mohammadpur, Dhaka-1207
Bangladesh
Mobile: +08801912003485
Email: jaypeedhaka@gmail.com

Jaypee Brothers Medical Publishers (P) Ltd
Bhotahity, Kathmandu
Nepal
Phone: +977-9741283608
Email: kathmandu@jaypeebrothers.com

Website: www.jaypeebrothers.com
Website: www.jaypeedigital.com

© 2015, Jaypee Brothers Medical Publishers

The views and opinions expressed in this book are solely those of the original contributor(s)/author(s) and do not necessarily represent those of editor(s) of the book.

All rights reserved. No part of this publication and Interactive DVD-ROM may be reproduced, stored or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission in writing of the publishers.

All brand names and product names used in this book are trade names, service marks, trademarks or registered trademarks of their respective owners. The publisher is not associated with any product or vendor mentioned in this book.

Medical knowledge and practice change constantly. This book is designed to provide accurate, authoritative information about the subject matter in question. However, readers are advised to check the most current information available on procedures included and check information from the manufacturer of each product to be administered, to verify the recommended dose, formula, method and duration of administration, adverse effects and contraindications. It is the responsibility of the practitioner to take all appropriate safety precautions. Neither the publisher nor the author(s)/editor(s) assume any liability for any injury and/or damage to persons or property arising from or related to use of material in this book.

This book is sold on the understanding that the publisher is not engaged in providing professional medical services. If such advice or services are required, the services of a competent medical professional should be sought.

Every effort has been made where necessary to contact holders of copyright to obtain permission to reproduce copyright material. If any have been inadvertently overlooked, the publisher will be pleased to make the necessary arrangements at the first opportunity.

Inquiries for bulk sales may be solicited at: jaypee@jaypeebrothers.com

Tips & Tricks in Operative Obstetrics & Gynecology

First Edition: 2011

Second Edition: **2015**

ISBN 978-93-5152-480-9

Printed at

Dedicated to

My mother Mrs Bharati Saxena

For being my good luck charm

*"I love my mother as the trees love water and sunshine—she helps me grow,
prosper, and reach great heights."*

—Terri Guillemets

Preface to the Second Edition

The second edition of “Tips & Tricks in Operative Obstetrics & Gynecology” has been inspired by the tremendous success of the first edition. The concept of the book remains the same as the previous edition, “spreading valuable knowledge”. There are many extensive textbooks available in the market, which give elaborate details about each surgery. The aim of this book belonging to the “Tips and Tricks series” is to acquaint the reader with different types of obstetric and gynecological surgical procedures used in the clinical practice. The second edition maintains the basic format of text presented in the first edition. Each chapter has a unique style of presentation in form of a template containing headings such as introduction, indications, preoperative preparation, surgical steps, postoperative care, advantages, disadvantages, complications, discussion, conclusion, etc. These headings are set in form of amber-colored arrowheads. This pattern has been followed for all the chapters of Section 2 (Operative Obstetrics) and Section 3 (Operative Gynecology) and would help the reader focus on specific aspects of surgery.

The book provides succinct details about various obstetric and gynecological surgeries, which will be very useful for the postgraduates, intellectual undergraduates, fellow gynecologists and residents in training, obstetric and gynecologic consultants and practitioners. This book would not serve as a textbook, rather as a ready source of reference for the obstetricians and gynecologists to quickly grasp the basic facts related to various obstetric and gynecological surgeries.

The book contains an accompanying CD, which provides 20 interesting case studies. Several new case studies have been added in this edition. This would help in ensuring that the book chapters do not become too theoretical and a definite correlation with clinical practice is maintained. In the second edition, the textual matter has been extensively reconstructed with several current developments, which have taken place in obstetrics and gynecology since the publication of first edition (e.g. revised updated guidelines for screening of cervical cancer, 2012; new nontherapeutic modalities for the treatment of postpartum hemorrhage, etc.). The second edition also encompasses new chapters on labor room procedures and various gynecological surgeries related to the treatment of endometriosis and urinary incontinence. To further simplify the surgeries, the text has been illustrated with the help of newly added beautiful, self-explanatory, multicolor pictures, tables and flow charts. The second edition also describes recent advances in gynecological laparoscopic surgery [especially robotic surgery, laparoendoscopic single site surgery (LESS), natural orifice transluminal surgery (NOTES), hand-assisted laparoscopic surgery (HALS), etc.], fetal surgery and surgeries related to assisted reproductive techniques.

Writing a book is a colossal task. It can never be completed without His divine intervention and approval. I would like to thank the Almighty for helping me in completing this giant project. I believe that writing a book involves a continuous learning process. Though extreme care has been taken to maintain accuracy while writing this book, constructive criticism would be greatly appreciated. Please e-mail me your comments at the email address: richa@drichasaxena.com. Also, please feel free to visit my website www.drichasaxena.com for obtaining information related to various other books written by me and to make use of the free resources available for the medical students.

Simultaneously, I would like to extend my thanks and appreciation to all the related authors and publishers whose references have been used in this book. Book creation is teamwork, and I acknowledge the way the entire staff of M/s Jaypee Brothers Medical Publishers (P) Ltd., New Delhi, India, worked hard on this manuscript to give it a final shape. I would like to thank Mr Jitendar P Vij (Group Chairman), Jaypee Brothers Medical Publishers, for being the guiding beacon, and source of inspiration and motivation behind this book. I would also like to thank Mr Ankit Vij (President) and Mr Tarun Duneja (Director-Publishing). Last but not the least, I would also like to thank the entire staff of Jaypee Brothers, especially Mr Amit Rai and Mr Nitish Kumar Dubey (Medical Editors) for editing the manuscript and coordinating the process of publication; Mr Rakesh Kumar (DTP Operator) for typesetting the book; Mr Sumit Kumar (Senior Graphic Designer) and Mr Gopal Singh Kirola (Graphic Designer) for making beautiful illustrations; and Mrs Seema Dogra for designing the cover page. May God bless them all!

Richa Saxena
(richa@drichasaxena.com)
www.drichasaxena.com

Preface to the First Edition

A colossal task like writing a book cannot ever take place without His divine permission and intervention. Therefore before writing anything else I would like to offer a word of thanks to the Almighty with the belief that God understands our prayers even when we can't find the words to say them...

"Knowledge always desires increase; it is like fire, which must first be kindled by some external agent, but which will afterwards propagate itself."

A perfect stranger once complimented by saying, "When doctors are in clinical practice, they treat one patient, but when they write, they are disseminating knowledge to a large number of doctors and thereby indirectly treating millions of people at the same time. This book has been written keeping this concept of "spreading valuable knowledge" in mind. There are many extensive textbooks available in the market, which give elaborate details about each surgery. The aim of this book belonging to the "Tips and Tricks series" is to acquaint the reader with different types of obstetric and gynecological surgical procedures used in the clinical practice. Old surgical procedures as well as the new ones are concisely described, which will be very practical and handy for the readers. This book is mainly targeted towards the postgraduates and consultant doctors to help them brush up their knowledge and acquire knowledge regarding the various new evolving surgical techniques. This book would prove useful to the postgraduate students, fellow gynecologists in training as well as obstetric and gynecologic consultants and practitioners. An intellectual undergraduate may also find this book as a useful read.

In order to ensure that the readers do not get carried away into the world of theoretical knowledge, an accompanying CD which provides some interesting case studies has been included with the book. This helps in establishing a liaison between clinical practice and academic knowledge. An important feature of this book is its unique style of presentation in the form of a template. There are three sections: general surgical considerations, operative obstetrics and operative gynecology of which all the chapters of sections 2 and 3 have been arranged in the form of a set template. The text has been illustrated with help of beautiful, self-explanatory, four-colored pictures.

Richa Saxena

Contents

SECTION 1: GENERAL CONSIDERATIONS

1. Normal Anatomy	3
• Female internal genitalia	4
• Normal menstrual cycle	8
• Blood supply to the pelvis	11
• Blood supply to the internal genital organs	12
• Lymph nodes of pelvis	13
• Pelvic nerves	14
• Anatomy of the abdominal wall	15
2. Ethics in Surgery	19
• Ethical principles for medical research and practice	20
• Patient communication	22
• Psychological preparation of the patient for surgery	23
• Evidence-based medicine	24
3. Anesthesia and Preoperative Care	25
• Preoperative principles in surgery	25
• General physical examination	29
• Systemic examination	30
• Pelvic examination	31
• Laboratory investigations	33
• Preoperative management	34
• Role of the anesthetist	35
• Types of anesthesia	36
• Preoperative principles prior to surgery	39
• Intraoperative care principles	39
4. Postoperative Care, Surgical Asepsis and Antibiotic Prophylaxis	42
• Postoperative care	42
• Postoperative complications	44
• Postoperative analgesia	48
5. Surgical Practices: Incisions, Wound Healing and Suture Materials	51
• Types of surgical incisions	51
• Basics of wound closure and healing	56
• Opening the abdomen: skin preparation, incision and hemostasis	58
• Principles of abdominal wall closure	59
• Wound complications	59
• Sutures	60
• Surgical needles	63
• Surgical knots	64

SECTION 2: OPERATIVE OBSTETRICS

6. Prenatal Diagnostic Procedures	71
• Overview of surgery	71
• Aims of surgery	73

Indications	73
Preoperative preparation	73
Surgical steps	74
• Amniocentesis	74
• Chorionic villus sampling	75
• Cordocentesis	76
Postoperative care	77
Advantages	77
Disadvantages	78
Complications	78
• Amniocentesis	78
• Chorionic villus sampling	79
• Cordocentesis	79
Discussion	80
• Amniocentesis versus CVS	80
• Transabdominal versus transvaginal route of CVS	80
• Prenatal diagnostic procedures in multifetal gestation	80

7. Forceps Delivery	83
• Overview of surgery	83
• Aims of surgery	83
• Surgical equipment used	83
Indications	87
• Maternal indications	87
• Fetal indications	87
Preoperative preparation	87
Surgical steps	88
• Application of the forceps	88
Postoperative care	91
• Postdelivery examination	91
Advantages	91
• Other applications of forceps	91
Complications	92
• Maternal complications	92
• Injuries to baby	93
Discussion	93
• Vacuum versus forceps	93
• Failed forceps	93

8. Vacuum Delivery	95
• Overview of surgery	95
• Aims of surgery	95
• Surgical equipment used	95
Indications	96
• Prerequisites for vacuum delivery	97
• Contraindications for the use of vacuum for operative vaginal delivery	97
Preoperative preparation	97
Surgical steps	97

- Steps of vacuum extraction in case of occipitoanterior position 97
 - Postoperative care 102**
 - Advantages 102**
 - Disadvantages 102**
 - Complications 102**
 - Neonatal injury 102
 - Discussion 103**
 - Forceps versus vacuum 103
 - Administration of an episiotomy 104
- 9. Normal Labor Room Procedures 106**
- Episiotomy 106
 - Induction of labor 107
 - Indications 108**
 - Episiotomy 108
 - Induction of labor 108
 - Preoperative preparation 108**
 - Episiotomy 108
 - Induction of labor 109
 - Surgical steps 109**
 - Repair of an episiotomy 109
 - Induction of labor 110
 - Postoperative care 112**
 - Care of an episiotomy 112
 - Induction of labor 112
 - Advantages 113**
 - Episiotomy 113
 - Induction of labor 113
 - Disadvantages 113**
 - Induction of labor 113
 - Complications 113**
 - Episiotomy 113
 - Induction of labor 113
 - Discussion 114**
 - Episiotomy 114
 - Induction of labor 115
- 10. Cesarean Section 117**
- Overview of surgery 117
 - Aims of surgery 117
 - Indications 117**
 - Preoperative preparation 117**
 - Surgical steps 118**
 - Postoperative care 124**
 - Immediate postoperative care 124
 - Advantages 125**
 - Complications 125**
 - Discussion 127**
 - Alternative techniques for cesarean delivery 129
- 11. Medical Termination of Pregnancy 132**
- Overview of surgery 132
 - Aims of surgery 132
 - Surgical equipment used 133
 - Indications 133**
 - Preoperative preparation 134**
 - Surgical steps 135**
 - Postoperative care 135**
 - Complications 137**
 - Discussion 138**
 - Choice between medical and surgical abortion 138
- 12. Cervical Incompetence 141**
- Overview 141
 - Aims of surgery 142
 - Indications 143**
 - Contraindications 143
 - Preoperative preparation 143**
 - Surgical steps 144**
 - McDonald's procedure 144
 - Shirodkar's technique 144
 - Wurm's procedure 145
 - Lash procedure 145
 - Transabdominal cerclage 147
 - Emergency cerclage 148
 - Postoperative care 148**
 - Removal of cerclage 148
 - Disadvantages 148**
 - Complications 148**
 - Discussion 148**
- 13. Surgical interventions for control of postpartum hemorrhage 150**
- Causes of PPH 150
 - Overview of surgery 151
 - Aims of surgery 151
 - Indications 151**
 - Preoperative preparation 151**
 - Surgical options if the placenta has delivered 152
 - Surgical steps 155**
 - Types of surgical options 155
 - Postoperative care 158**
 - Advantages 158**
 - Complications 158**
 - Discussion 158**
- 14. Repair of Perineal Injuries 161**
- Perineal injury 161
 - Overview of surgery 161
 - Aims of surgery 161
 - Indications 161**
 - Repair of vaginal tears 161
 - Preoperative preparation 161**
 - Surgical steps 162**
 - Repair of vaginal tears 162**
 - Repair of a fourth-degree laceration 162**
 - Repair of cervical tears 164**
 - Postoperative care 164**
 - Care of a fourth-degree laceration 164
 - Complications 165**

Discussion 165	
• Anatomical considerations 165	
• Risk factors 166	
• Effect of the childbirth on the pelvic floor muscles 166	
15. Manual Removal of Placenta 168	168
• Overview of surgery 168	
• Aims of surgery 168	
Indications 168	
• Simple placental retention 168	
• Placental separation has not occurred 168	
Preoperative preparation 170	
Surgical steps 171	
• Manual removal of placenta 171	
• Management of morbidly adherent placenta 171	
Postoperative care 173	
Complications 174	
Discussion 174	
• Anesthesia technique 174	
16. Shoulder Dystocia 177	177
• Overview 177	
Surgical steps 178	
Complications 180	
• Fetal and neonatal complications 180	
• Maternal complications 182	
Discussion 182	
17. Obstetric Hysterectomy 184	184
• Overview of surgery 184	
• Aims of surgery 184	
Indications 184	
• Obstetric indications for emergency hysterectomy 184	
• Indications for hysterectomy at the time of cesarean section 185	
• Indications for peripartum hysterectomy 185	
Preoperative preparation 185	
Surgical steps 186	
Postoperative care 190	
Advantages 190	
Disadvantages 191	
Complications 191	
Discussion 191	
18. Ectopic Pregnancy 193	193
• Overview of surgery 193	
• Aims of surgery 194	
Indications 196	
• Laparotomy 196	
• Laparoscopy 196	
Preoperative preparation 197	
Surgical steps 197	
• Salpingectomy 197	
• Partial salpingectomy 197	
• Salpingotomy 197	
• Laparoscopic surgery 198	
Postoperative care 198	
Advantages 198	
• Benefits of laparoscopic management of tubal pregnancy 198	
• Laparotomy 198	
Complications 198	
Discussion 199	
• Expectant management 202	
• Medical management (methotrexate) 202	
• Combined medical and surgical therapy 203	
• Type of surgery to be performed 203	
19. Fetal Surgery 205	205
• Overview of surgery 205	
• Aims of surgery 205	
Indications 205	
Preoperative preparation 205	
Surgical steps 207	
• Surgery for urinary tract obstructive defects 207	
• Surgery for lung defects 207	
• Fetal surgery for twin-to-twin transfusion syndrome 208	
• Surgery for congenital diaphragmatic hernia 209	
• Surgery for neural tube defects 210	
• Fetal surgery for ovarian cysts 211	
Postoperative care 211	
Advantages 212	
Complications 212	
Discussion 213	
SECTION 3: OPERATIVE GYNECOLOGY	
20 Surgery for Uterine Leiomyomas 217	217
• Overview of surgery 217	
• Aims of surgery 217	
Indications 218	
• Hysterectomy 218	
• Myomectomy 219	
Preoperative preparation 220	
Myomectomy 220	
Uterine artery embolization 220	
Surgical steps 221	
• Abdominal myomectomy 221	
• Laparoscopic myomectomy 222	
• Hysteroscopic myomectomy 225	
• Robotic myomectomy 225	
• Uterine artery embolization 227	
Postoperative care 227	
Advantages 229	
• Advantages of laparoscopic myomectomy 229	
• Advantages of robotic myomectomy 229	
Disadvantages 229	
Complications 229	
• Hysterectomy 229	
• Myomectomy 230	
• Complications of laparoscopic myomectomy 232	
• Complications associated with UAE 233	
• Discussion 234	

21 Surgery for Polycystic Ovarian Disease**237**

- Overview of surgery 238
- Aims of surgery 238

Indications 239

- Ovarian wedge resection 239
- Laparoscopic ovarian drilling 239

Preoperative preparation 239**Surgical steps 239****Postoperative care 241****Advantages 241****Disadvantages 241****Complications 241****Discussion 242**

- Pathophysiology of PCOD 243
- Mechanism of action of LOD 244
- Ovulation and pregnancy rates with LOD 244

22. Prolapse Uterus**247**

- Overview of surgery 247
- Aims of surgery 248
- Principles of surgery for pelvic organ prolapse 248

Indications 250

- Hysterectomy 250
- Anterior colporrhaphy 250
- Posterior colpoperineorrhaphy 250
- Manchester operation 250
- Abdominal sling surgery 250
- Le Fort colpocleisis 250

Preoperative preparation 250**Surgical steps 251**

- Hysterectomy 251
- Anterior repair 251
- Posterior repair 251
- Manchester repair 252
- Abdominal sling surgery 255
- Obliterative procedures 256

Postoperative care 257**Advantages 257**

- Colpocleisis 257

Disadvantages 258**Complications 259**

- Complications due to uterine prolapse 259
- Intraoperative complications of anterior colporrhaphy 259
- Complications of Le Fort colpocleisis 259

Discussion 259

- Supports of the uterus 259
- Muscles of the pelvic floor 260
- Innovations in surgery for uterine prolapse 262

23. Tubal Sterilization Procedures**266**

- Overview of surgery 266
- Aim of surgery 266

Indications 267**Preoperative preparation 267****Surgical steps 267**

- Anesthesia 267

- Surgical approach 267

Postoperative care 273**Advantages 273****Complications 274****Discussion 276****24. Hysterectomy****278**

- Overview of surgery 278
- Aims of surgery 279

Indications 279**Preoperative preparation 279****Surgical steps 280**

- Abdominal hysterectomy 280
- Vaginal hysterectomy 286
- Minimally invasive technique in hysterectomy 289

Postoperative care 293**Advantages 293**

- Abdominal hysterectomy 293
- Vaginal hysterectomy 293
- Subtotal hysterectomy 293

Disadvantages 293

- Vaginal hysterectomy 293
- Abdominal hysterectomy 294

Complications 294

- Immediate 294
- Remote 294

Discussion 294

- Deciding the route of surgery: abdominal versus vaginal hysterectomy or LAVH 294
- Retention or removal of ovaries 295

25. Surgery for Infertility**297**

- Overview of surgery 297
- Aims of surgery 297
- Surgical equipment used 297

Indications 298**Preoperative preparation 299****Surgical steps 299**

- Salpingo-ovariolysis 299
- Fimbrioplasty 299
- Salpingostomy 299
- Tubotubal anastomosis 300
- Hysteroscopic tubal cannulation 303

Postoperative care 304**Advantages 304****Disadvantages 304****Complications 304****Discussion 306****26. In Vitro Fertilization****308**

- Overview of surgery 308

Indications 309**Preoperative preparation 309****Surgical steps 309**

- Ovarian stimulation for in vitro fertilization 309
- Follicular aspiration 312

• Oocyte classification 312 • Sperm preparation and oocyte insemination 312 • Embryo culture 312 • Embryo transfer 313	
Postoperative care 314	
Disadvantages 314	
Complications 314	
• Ovarian hyperstimulation syndrome 314 • Ectopic pregnancy 316 • Iatrogenic multiple pregnancy 316 • Oncogenic risk related to assisted reproductive technology 317	
Discussion 317	
• Outcome 317 • Failure of the procedure 318 • Poor responders to ovarian stimulation 318 • Other techniques 318	
27. Surgery for Endometriosis 321	321
• Overview of surgery 321 • Aims of surgery 322	
Indications 324	
Preoperative preparation 325	
Surgical steps 326	
• Surgical equipment used 326 • Surgery for endometriosis 326	
Postoperative care 328	
Advantages 328	
Complications 328	
Discussion 331	
28. Surgery for Uterine Malformations 333	333
• Overview of surgery 333	
Indications 335	
• Indications for vaginoplasty 335 • Indications for metroplasty 335	
Preoperative preparation 335	
• Müllerian aplasia (vaginal agenesis) 335 • Metroplasty for bicornuate uterus 336 • Metroplasty for septate uterus 337	
Surgical steps 337	
• Vaginoplasty 337 • Alternative surgical strategies for vaginoplasty 342 • Metroplasty for bicornuate uterus 343 • Metroplasty for septate uterus 343	
Postoperative care 346	
• Vaginoplasty 346 • Metroplasty for bicornuate uterus 347 • Metroplasty for septate uterus 347	
Complications 347	
• Vaginoplasty 347 • Metroplasty 347	
Discussion 348	
29. Surgery for Cancers 350	350
• Overview of surgery 351 • Aims of surgery 351	
Indications 351	
Preoperative preparation 352	
• Endometrial cancer 352 • Cervical cancer 352 • Ovarian cancer 352 • Vulvar cancer 353	
Surgical steps 353	
• Surgical treatment for cervical cancer 353 • Surgical treatment for endometrial cancer 356 • Surgical treatment for malignant ovarian neoplasms 358 • Surgical treatment for vulvar cancer 364 • Surgical treatment of vulvar cancer 364 • Post-treatment surveillance 368	
Complications 369	
Discussion 370	
30. Surgery for Urinary Incontinence 371	371
• Overview of surgery 372 • Aims of surgery 372	
Indications for surgery 372	
Preoperative preparation 372	
Intraoperative details 373	
Postoperative care 377	
Complications 377	
Discussion 377	
31. Diagnostic and Operative Hysteroscopy 380	380
• Overview of surgery 380 • Surgical equipment 380	
Indications 383	
• Diagnostic indications 383 • Operative indications 383	
Preoperative preparation 385	
Surgical steps 386	
• Diagnostic hysteroscopy 386 • Operative hysteroscopy 388	
Postoperative care 388	
Advantages 388	
Disadvantages 388	
Complications 389	
• Intraoperative complications 389	
Discussion 390	
32. Diagnostic and Operative Laparoscopy 392	392
• Overview 392 • Surgical equipments 392	
Indications 395	
• Diagnostic laparoscopy 395 • Therapeutic laparoscopy 397	
Preoperative preparation 400	
Surgical steps 401	
• Open laparoscopy 401 • Expanding-access cannulas 401 • Veress needle insertion followed by a primary trocar insertion 401	
Postoperative care 403	
Advantages 403	

Disadvantages 403**Complications 404**

- *Reducing laparoscopic related complications 405*

Discussion 405**33. Recent Advances in Gynecological Surgery 408**

- *Overview of surgery 408*
- *Surgical equipment 409*
- *Aims of surgery 414*

Indications 414

- *Robotic surgery 414*
- *Single port laparoscopic surgery 414*

Preoperative preparation 415**Surgical steps 415**

- *Robotic surgery 415*

- *Laparo-endoscopic single-site surgery 416*

Postoperative care 417**Advantages 417**

- *Robotic surgery 417*
- *Laparo-endoscopic single-site surgery 418*

Complications 418

- *Robotic surgery 418*
- *Laparo-endoscopic single-site surgery 418*

Discussion 418

- *Robotic surgery 418*
- *Laparo-endoscopic single-site surgery 422*

Index**425**