Contents

1. **Intrauterine Insemination: Patient Selection and Workup** 1
   Rishma Dhillon Pai
   ***Rationale** 1*
   ***Indications of Intrauterine Insemination** 1*
   ***Prerequisites for Intrauterine Insemination** 3*

2. **Ovulation Induction** 7
   Nandita Palshetkar
   ***Rationale for Inducing Ovulation while Carrying Out Intrauterine Insemination** 7*
   ***Procedure of Ovarian Stimulation and Induction** 7*

3. **The Luteal Phase** 24
   Hrishikesh Pai
   ***Luteal Phase Support** 24*
   ***Role of Antibiotics** 26*

4. **Nuchal Translucency** 28
   Shailesh Kore, Neha Saxena
   ***Increased Nuchal Translucency—Pathophysiology** 28*
   ***Measurement of Nuchal Translucency** 29*
   ***Repeatability in the Measurement of Nuchal Translucency** 31*
   ***Nuchal Translucency and Chromosomal Defects** 32*
   ***Accuracy of Nuchal Translucency as a Screening Marker** 33*

5. **Applications of Three-dimensional Ultrasound in Obstetrics** 38
   Narendra Malhotra, Jaideep Malhotra, Neharika Malhotra Bora
   ***Three-Dimensional Voluson Technique** 40*
   ***Digital Three-Dimensional Sonography** 40*
   ***Three-Dimensional Ultrasound in Obstetrics** 40*
   ***Limitations of Three-Dimensional Ultrasound** 46*

6. **Intrauterine Growth Restriction: Diagnosis and Management** 47
   Anupama Rao, Zenab Tambawala
   ***Screening for Intrauterine Growth Restriction** 48*
   ***Confirmation of Diagnosis and Further Surveillance** 50*
   ***Management of IUGR** 52*

7. Assessing Fetal Wellbeing in Third Trimester 56
Ameet Patki, Deepali Kale

Fetal Movement Counting 57
Nonstress Test 57
Acoustic Stimulation Tests 59
Contraction Stress Test 59
Biophysical Profile 60
Uterine Artery Doppler 62
Umbilical Artery Doppler 62
Other Fetal Artery Doppler Parameters 62

8. Imaging Modalities for Adherent Placenta 65
Vinita Salvi

Diagnosis 65
Ultrasonography 66
Magnetic Resonance Imaging 67

9. Intrapartum Monitoring of Fetus: What's New? 69
Vandana Bansal

Intermittent versus Electronic Fetal Monitoring 70
Electronic Fetal Monitoring: Definitions 72
Classification of Fetal Heart Rate Tracings 82
Methods of Intrauterine Resuscitation used for Category II or Category III Tracings Conservative Measure (NICE 2014) 84
Adjuncts to the use of Continuous Electronic Fetal Monitoring including Fetal Blood Sample 85
Interpretation of FHR Traces/Cardiotocographs (NICE Guidelines) 86
Principles of Intrapartum CTG Trace Interpretation 90
Electronic Fetal Monitoring and Record-keeping 90

10. Vaginal Hysterectomy in Case of Previous Lower Segment Cesarean Section 92
Shirish S Sheth

Access to the Vesicouterine Peritoneum: Anterior Pouch 92
Surgical Technique in Women with History of Two or More C-Sections in Past 97

11. Management of Third and Fourth-degree Perineal Tears 101
Bipin Pandit

Prediction and Prevention of Obstetric Anal Sphincter Injury 102
Surgical Techniques 105
Overlapping 105
End-to-end (Approximation) 105

Postoperative Management 107
Prognosis 108
Future Deliveries 109
Risk Management 109

12. Human Papillomavirus Vaccination **111**
Neerja Bhatla, Deepali Kale

Types of Vaccine and Vaccination Schedule 112
The Future Perspective 114

13. Treatment of Cervical Intraepithelial Neoplasia **116**
Nikhil Purandare, Deepali Kale

Treatments of Cervical Intraepithelial Neoplasia 117
Excision and Ablative Techniques 117
Glandular Disease 121
Follow-up after Treatment 121

14. Electrosurgery and Energy Use at Endoscopy **123**
CV Hegde

15. The Art of Laparoscopic Suturing **127**
Rajendra Sankpal

Needle Holder 128
Assisting Needle Grasper 128
Choice of Needles 128
Choice of Laparoscope 128
Choice of Suture Material 129
Camera Port 129
Ancillary Ports 129
Taking a Bite with Needle 132
Placing a Knot 132

16. 3D Laparoscopy **136**
Rakesh Sinha, Gayatri Rao, Shweta Raje

Brief History of 3D Vision 137
Physics of 3D 138
Stereoscopic View 139
Learning Curve 142
Costs 143
Benefits of 3D Laparoscopy 145

17. Laparoscopic Hysterectomy: Easy and Safe **147**
Prakash Trivedi, Sandeep Patil, Animesh Gandhi, Soumil Trivedi

Indications of Laparoscopic Hysterectomy 148

Bipolar and Laparoscopic Suturing Technique 148
Ligasure and Harmonic Scalpel 148
Enseal and Harmonic Scalpel 150
Thunderbeat and Harmonic Scalpel 150
Tackling the Uterine Artery at the Origin 152
Morcellation Controversy and the Solution 154
The Lateral Window for Difficult Bladder Dissection 155
Single-Port or Single-Incision Multiple-Port Technique 155
Robotic Surgery for Removal of Uterus 157
Complications in Total Laparoscopic Hysterectomy (TLH) 157

18. Office Hysteroscopy **159**
Pratik Tambe, Pooja Bandekar

Operative Procedure 160
Technological Improvements 160
Reliability and Feasibility 160
Operative Office Hysteroscopy 161
Comparison with Daycare Hysteroscopy 162
Operative Office Hysteroscopy without Anesthesia 163
Pain Relief during Outpatient Hysteroscopy 163
Cochrane Meta-analysis 164
Postmenopausal Bleeding 164
Pre-IVF Office Hysteroscopy 165
Recurrent Implantation Failure 165

19. Hysteroscopy in Asherman's Syndrome **167**
Neeta Warty, Rajkishor Sawant

Incidence 168
Etiopathology 168
Classification 169
Relevant Anatomy 170
Role of Hysteroscopy 170
Optimizing Results and Preventing Recurrence 173
Our Experience 175
Postprocedure 176
Irrigation Modalities 176
Complications 177
Sequelae 178
Hysteroscopy under Guidance 181
Other Techniques 182

20. The Incompetent Cervix 186
Ameya Purandare

Etiology 187
Pathogenesis 188
Diagnosis 188
Methods of Treatment 191
Technical Details 192
Evidence-based Medicine—RCOG Trial 199
Possible Developments 201

21. Operative Vaginal Delivery 203
Nozer K Sheriar, Ameya Purandare

Prevalence of Use 203
Classification 204
Indications and Contraindications 204
Prerequisites 204
Choice of Instrument: Forceps vs Vacuum 207
Forceps 208
Vacuum/Ventouse 220
Post-Delivery Care 226
Training in Operative Vaginal Delivery 226
Future of Operative Vaginal Delivery 227

22. Obstetric Hysterectomy 230
Ganpat Sawant, Aaradhana Wagh

Incidence 230
Indications 230
Surgical Consideration 231
Surgical Technique 231

23. Internal Iliac Artery Ligation in Obstetrics 233
Adi E Dastur, Ameya Purandare

Surgical Anatomy 233
Anatomic Relations of Internal iliac Artery 233
Collateral Circulation 233
Hemodynamic Consequence of Internal Iliac Ligation 234
Indications of Internal Iliac Ligation 235
Success Rate of Internal Iliac Artery Ligation 235
Technique 235
Efficacy 236
Complications 237
Recent Advances 237

24. Laparoscopic Myomectomy **239**
S Krishnakumar, Pratik Tambe
Indications 239
Operative Procedure 240
Laparoscopic vs Hysteroscopic Approach 242
Practice Guidelines 245
Recommendations 245

25. Surgical Management of Endometriosis **248**
Nagendra Sardeshpande
Indications for Surgery 248
Why Surgery? 249
Why Endoscopic Surgery? 249
Preoperative Evaluation 249
Steps of Surgery for Endometriosis 250
Surgery for Deep Infiltrating Endometriosis 253
Decision Making in Endometriosis Associated with Infertility 254
Surgical Management of Endometriomas 254
Role of Adhesion Barriers 259
Surgical Management of Other Common Forms of Endometriosis 259
Other Sites of Endometriosis 262
Pain Relief for Symptomatic Endometriosis 263
Perioperative Management 263
Hysterectomy for Endometriosis 263

Index ***267***