Contents

SECTION 1: GENERAL

Chapter 1. An Overview 3
SN Tripathy, GN Dash
- *Historical Aspects of Cervix 3*
- *Composition of the Cervix 6*
- *Cervical Ripening 6*
- *Cervix and Preterm Labor 7*
- *Cervix-Sparing Hysterectomy (Sub-Total Hysterectomy) 7*
- *Cancer Cervix 8*
- *Screening for Cervical Cancer 8*
- *Human Papillomavirus Infection and Cervical Cancer 8*
- *Imaging of Cervix 8*
- *Ultrasonography of Cervix 8*
- *Psychosocial Problems of Cancer Cervix 10*

Chapter 2. Surgical Anatomy of Cervix 12
Ojaswini Patel, Tusar Mahapatra
- *History 12*
- *Development 13*
- *Different Anomalies 13*
- *Gross Anatomy 15*
- *Anteflexion and Anteversion 16*
- *Arbor Vitae 16*
- *Fascia Around Cervix (Supravaginal part) 17*
- *Relationships 18*
- *Cervix to Corpus Ratio 18*
- *Microscopy 18*
- *Transformation Zone 19*
- *Electron Microscopy and Histochemical Features of Cervical Epithelium 19*
- *Cervical Mucus 21*
- *Blood Supply, Nerve Supply and Lymphatic Drainage 22*
- *Cervix and Conception 22*
- *Cervical Changes in Pregnancy and Labor 22*

Chapter 3. Physiology of Cervix 26
SN Tripathy
- *Cervix in Nonpregnant Condition 26*
- *Cervical Mucus Plugs 28*
- *Cervical Maturation During Pregnancy 28*
- *Physiology of Cervical Ripening 29*

Chapter 4. Effects of Drugs on Cervix 32
H Pattnaik, Susnigdha Devdarsini, SN Tripathy
- *Drugs Used in Non-pregnant Cervix 32*
- *Fertility Inducing Drugs 33*
- *Diethylstilbestrol (DES) 33*
- *Drugs Used in Pregnant Cervix 33*
- *Late Pregnancy 34*
- *Prostaglandins 35*

- *PGE1 (Misoprostol) 36*
- *PGE2 (Dinoprostone) 36*
- *Hyaluronidase 37*
- *Mechanical Modalities 37*

SECTION 2: OBSTETRICS

Chapter 5. Cervix in Pregnancy and Labor 43
LK Pandey, Sulekha Pandey, Garima Gupta, Gayatri Satpathy
- *Functions of Cervix in Pregnancy 43*
- *Cervical Signs in Pregnancy 44*
- *Phases of Parturition 44*

Chapter 6. Cervical Insufficiency 53
Gangadhar Sahoo, P Sujata
- *Risk Factors 54*
- *Pathophysiology 54*
- *Incidence 54*
- *Recurrence 54*
- *Diagnosis 54*
- *Management 56*
- *Cerclage 57*
- *Cerclage Techniques 60*
- *Postoperative Care 61*
- *Removal of the Stitch 62*
- *Contraindications 62*
- *Complications 62*

Chapter 7. Cervical Pregnancy 65
Saswati Sanyal Choudhury
- *Etiology 65*
- *Pathology 65*
- *Presenting Symptoms 66*
- *Ultrasonography 66*
- *Management 66*
- *Medical Management 66*
- *Surgical Management 67*
- *Hysterectomy 67*

Chapter 8. Contraception and the Cervix 71
Tripti Sinha, Kusum G Kapoor
- *Review of Cervical Anatomy and Physiology 72*
- *Pathology of Cervix During Reproductive Years 72*
- *Contraception through Effects Mediated on the Cervix 73*
- *Adverse Effects of Contraceptives on Cervix 74*
- *Protocol for Contraceptive Counseling, Method Selection and Follow-up Visits 75*
- *Women with Double Cervix 75*

Chapter 9. Cervical Factors in Infertility and Fertility 77
SN Tripathy
- *Cervical Mucus 77*
- *Vaginal Ecosystem 78*
- *Mucins 79*
- *Sperm Glycocalyx 79*
- *Large Loop Excision of the Transformation Zone 80*

- *Post-coital Test 80*
- *Cytokines in Cervical Mucus 81*
- *Treatment 82*

Chapter 10. Molecular Biology of Cervix in Pregnancy, Labor and Puerperium 84
Saubhagya Kumar Jena
- *Cervical Architecture 84*
- *Cervical Remodeling 85*
- *Molecular Biology in Different Phases of Cervical Remodeling 86*
- *Preterm Cervical Remodeling 90*
- *Cervical Remodeling in Women and its Clinical Importance 91*

Chapter 11. Dilemma in the Management of Cervical Cancer in Pregnancy 95
Manju Gita Mishra, Pragya Mishra Choudhary, Anupama Singh
- *Epidemiology 96*
- *Diagnosis 97*
- *Pelvic Examination 97*
- *Radiological Investigations 99*
- *Computed Tomography and PET Scan 99*
- *Tumor Markers 99*
- *Management 100*
- *Delivery Route 103*
- *Neoadjuvant Chemotherapy During Pregnancy 104*

SECTION 3: GYNECOLOGY

Chapter 12. Benign Diseases of the Cervix 111
Bharati Misra, Sankarsan Gan, Ishita Priyam Singh
- *Development 111*
- *Anatomy 111*
- *Congenital Anomalies of Cervix 112*
- *Acquired Diseases of Cervix 113*
- *Signs and Symptoms 113*
- *Treatment 114*
- *Cervicitis 114*
- *Cervical Polyp 115*
- *Cervical Endometriosis 116*
- *Cervical Stenosis 116*
- *Cervical Fibroid 117*
- *Cervical Fibroid in Pregnancy 118*
- *Cervical Cysts 118*
- *Cervical Ectropion 118*

Chapter 13. Cervical Tuberculosis 119
(Mrs) SN Tripathy, SN Tripathy
- *Take Home Message 123*

SECTION 4: ONCOLOGY

Chapter 14. Cervical Cancer Screening in Modern Century 127
Sadhana Gupta, Hema J Shobhane
- *We May Never Understand Illness Such as Cancer. In Fact, We May Never Cure It. But an Ounce of Prevention is Worth More than A Million Pounds of Cure 127*

- *Methods for Screening 128*
- *Steps for Sample Collection 129*

Chapter 15. Colposcopic Appearance of Normal and Abnormal Cervix 133
Indrani Ganguli
- *Screening Tests for Cervical Cancer 134*
- *Indications of Colposcopy 134*
- *Contraindications of Colposcopy 135*
- *Anatomy of Cervix 135*
- *Basis of Colposcopy 135*
- *Components of Normal Transformation Zone 136*
- *Normal Transformation Zone 138*
- *Atypical Transformation Zone 138*
- *Importance of Transformation Zone 139*
- *Steps of Colposcopy 140*
- *Basic Instruments of Colposcopy 140*
- *Biopsies 145*
- *Endocervical Curettage 145*
- *Documentation 146*

SECTION 5: THE FUTURE

Chapter 16. Psychosocial Aspects of Carcinoma Cervix..... 153
Abha Rani Sinha, Anupama Singh
- *Psychological Outcomes 156*
- *Sexual Functioning Outcomes 157*
- *Radical Hysterectomy and Related Surgeries 157*
- *Radiation Therapy 158*
- *Combined Surgery and Radiotherapy 158*
- *Radical Surgeries 158*
- *Sexual Disruption with the Initial Appearance of Symptoms and Signs of Cancer 158*

Chapter 17. Human Papillomavirus Infection, Cervical Cancer and HPV Vaccines 164
SN Tripathy, Ambuja Chounar
- *HPV Natural History 165*
- *Immune Response to HPV 166*
- *Epidemiology 166*
- *Risk Factors for Infection 167*
- *Screen and Treat Protocols 168*

Index 177