

Contents

PART 1

OBSTETRICS

SECTION 1

REPRODUCTIVE BASICS

1. Embryology and Fetology, Normal Placenta, Placental Hormone 3
Nidhi Garg, Vasudha Bhargavi, Naseema A
2. Teratology and Drug Categories in Pregnancy 14
Neha Agarwal, Rachita Garg
3. Normal Pregnancy Events 19
Nidhi Garg, Priyanka Nandini
4. Prenatal Management of Minor Ailments during Pregnancy 22
Nidhi Garg
5. Physiological Changes in Pregnancy, Postpartum, and Lactation 24
Shalini Shakarwal
6. Maternal and Perinatal Statistics 29
Shalini Shakarwal, Naseema A
7. Prenatal Laboratory Investigations 34
Nidhi Garg, Naseema A
8. Establishment of GA and History Taking Examination—Diagnosis of Pregnancy including Fetal Orientation in Utero-Leopold Maneuvers 35
Poonam Sachdeva, Anupriya Narain, Sakshi Aggarwal
9. Ultrasound in Obstetrics 41
Poonam Sachdeva, Anqa Chowdhary, Sarah Fatima Siddiqui, Surbhi

SECTION 2

PREPREGNANCY

10. Preconceptional Care 53
Latika Sahu, Ullash Kumari
11. Genetic Disorders 58
Reena Rani, Sonia Sindher

SECTION 3

EARLY ANTENATAL

12. PCPNDT Act, Prenatal Diagnostic Techniques and Invasive Procedures 65
Poonam Kashyap, Ankita Kumari
13. Hyperemesis Gravidarum 69
Shalini Shakarwal
14. Bleeding in Early Pregnancy 72
Renu Tanwar, Kriti Tiwari, Kandapu Mounika
15. Termination of Pregnancy 77
Rachna Sharma, Ojaswini Sharma
16. Ectopic Pregnancy 80
Ashok Kumar, Sharanya
17. Molar Pregnancy 85
Ashok Kumar, Meghana Reddy

SECTION 4

LATE ANTENATAL—MATERNAL-MEDICAL DISORDERS

18. Hypertensive Disease of Pregnancy 91
Asmita M Rathore, P Soumya Singh, Surbhi
19. Diabetes Mellitus in Pregnancy 97
Latika Sahu, Ankita Kumari, Amrit Adarsh
20. Heart Disease in Pregnancy 103
Asmita M Rathore, Kiran Sri Chittala
21. Anemia in Pregnancy 112
Asmita M Rathore, Kiran Sri Chittala
22. Thyroid Disorder in Pregnancy 119
Latika Sahu, Raj Rathod
23. Epilepsy in Pregnancy 123
Poonam Kashyap, Raj Rathod
24. Liver Disease in Pregnancy 126
Sangeeta Bhasin, Vaishnavi Jayaram
25. Pregnancy with Renal Tract Disorder 131
Asmita M Rathore, P Soumya Singh, Surbhi

26. **Respiratory Diseases in Pregnancy**137
Latika Sahu, Reetu Yadav
27. **Antiphospholipid Antibody Syndrome and Thrombophilias in Pregnancy**139
Chetna A Sethi, Leena Purain
28. **Disseminated Intravascular Coagulation in Pregnancy**145
Latika Sahu, P Soumya Singh
29. **Thrombocytopenia in Pregnancy**149
Neha Agarwal, Rachita Garg
30. **Dyspnea in Pregnancy**152
Chetna A Sethi, Naseema A
31. **Autoimmune Diseases in Pregnancy: Systemic Lupus Erythematosus/ Rheumatoid Arthritis**154
Chetna A Sethi, Gohar

SECTION 5

LATE ANTENATAL—MATERNAL-GENERAL

32. **Antepartum Hemorrhage**159
Sangeeta Bhasin, AM Bharathi Priya
33. **Multifetal Gestation**165
Shikha Sharma, Parminder Kaur
34. **Preterm Labor**170
Preeti Singh, Sameena Naz
35. **Sexually-transmitted Infections in Pregnancy**175
Preeti Singh, Nidhi Chowdhary
36. **Nonsexually Transmitted Infection in Pregnancy**184
Preeti Singh, Nidhi Chowdhary
37. **Human Immunodeficiency Virus Infection in Pregnancy**194
Preeti Singh, Nidhi Chowdhary
38. **Hepatitis B Infection in Pregnancy**201
Preeti Singh, Nidhi Chowdhary
39. **COVID-19 Infection in Pregnancy**205
Preeti Singh, Nidhi Chowdhary
40. **Tuberculosis in Pregnancy**215
Preeti Singh, Nidhi Chowdhary
41. **PROM and Pre-PROM**218
Bidhisha Singha, Neha Kumar
42. **Vaginal Birth after Cesarean**222
Deepti Goswami, Bandana Bharali
43. **Post-term Pregnancy**224
Chetna A Sethi
44. **Induction of Labor**226
Chetna A Sethi, Divya KV
45. **Oligohydramnios**230
Shakun Tyagi, Sakshi Aggarwal
46. **Polyhydramnios**232
Latika Sahu, Ankita Kumari
47. **Surgical and Gynecological Disorders in Pregnancy**235
Poonam Kashyap, Suvidya Singh
48. **Malpresentation and Malposition and Occipitoposterior**241
Madhavi M Gupta, Sandhya KS
49. **Breech Presentation**243
Madhavi M Gupta, Sandhya KS
50. **Transverse Lie**248
Madhavi M Gupta, Sandhya KS
51. **Cord Presentation and Prolapse**250
Chetna A Sethi, Kanika Gupta
52. **Face and Brow Presentation**253
Madhavi M Gupta, Sandhya KS
53. **Compound Presentation**256
Chetna A Sethi, Kanika Gupta
54. **Abnormal Placenta**257
Nidhi Garg, Sarah Mirza
55. **Drugs Used in Obstetrics**260
Nidhi Garg
56. **Pregnancy at Extremes of Reproductive Age**264
Latika Sahu, Ullash Kumari
57. **Pregnancy in Women with Extremes of BMI**267
Latika Sahu, Ullash Kumari
58. **Sepsis in Pregnancy and Puerperium**270
Nalini Bala Pandey, Deepti Goswami

SECTION 6

LATE ANTENATAL—FETAL

59. **Alloimmunization**279
Krishna Agarwal, Charishma
60. **Fetal Growth Restriction**284
Shakun Tyagi, Sakshi Aggarwal
61. **Macrosomia**290
Latika Sahu, Ankita Kumari
62. **Fetal Hypoxia, Meconium-Stained Amniotic Fluid**292
Chetna A Sethi, Naseema A
63. **Fetal Infection**294
Preeti Singh, Nidhi Chowdhary
64. **Fetal Congenital Malformations**302
Neha Agarwal, Lekshmi

65. Fetal Tumors.....310	68. Intrauterine Fetal Death.....320
<i>Latika Sahu, Soumya Darsan</i>	<i>Niharika Dhiman, Hansveen Lamba</i>
66. Antepartum Fetal Monitoring.....312	69. Fetal Therapy.....322
<i>Niharika Dhiman</i>	<i>Latika Sahu, Naseema A</i>
67. Fetal Hydrops.....317	
<i>Neha Agarwal, Soumya Darsan</i>	

SECTION 7

LABOR

70. Normal Pelvis and Skull, Stage, Mechanism, and Conduct of Normal Labor.....331	72. Labor Analgesia and Anesthesia.....350
<i>Sangeeta Gupta, Garima Mann, Naseema A</i>	<i>Pushpa Mishra, Neha Chowdhary</i>
71. Abnormal Labor.....344	73. Obstetric Complications: Maternal and Fetal Injuries.....355
<i>Chetna A Sethi, Tsering Cho, Neha Chowdhary</i>	<i>Pushpa Mishra</i>

SECTION 8

POSTPARTUM

74. Normal Puerperium.....365	77. Maternal Collapse and Inversion of Uterus.....381
<i>Bidhisha Singha, Raj Rathod</i>	<i>Nalini Bala Pandey, P Soumya Singh</i>
75. Breastfeeding and Care of the Newborn.....370	78. Puerperal Fever.....389
<i>Nalini Bala Pandey, Kiran Sri Chittala</i>	<i>Nalini Bala Pandey, P Soumya Singh</i>
76. Postpartum Hemorrhage.....373	79. Postpartum Mental Health Issues.....391
<i>Latika Sahu, Garima Mann</i>	<i>Nalini Bala Pandey, P Soumya Singh</i>

SECTION 9

OPERATIVE OBSTETRICS

80. Instrumental Vaginal Delivery.....397	82. Cesarean Section.....405
<i>Deepti Goswami, Bandana Bharali</i>	<i>Chetna A Sethi, Alka, Naseema A, Ritika Nangia</i>
81. Episiotomy.....404	83. Shoulder Dystocia.....411
<i>Bidhisha Singha, Naseema A</i>	<i>Latika Sahu, Ankita Kumari</i>

PART 2

GYNECOLOGY

SECTION 10

BASICS IN GYNECOLOGY

84. Female Reproductive Tract and Urinary Tract Anatomy and Embryogenesis.....417	86. History Taking and Examination in Gynecology.....429
<i>Reena Rani, Divya Gaur</i>	<i>Pushpa Mishra</i>
85. Physiology of Menstruation.....425	
<i>Reena Rani, Sujata Bharadwaj</i>	

SECTION 11

GYNECOLOGIC PROCEDURES

87. Minor Gynecologic Procedures.....435	89. Minimally Invasive Surgery.....444
<i>Shakun Tyagi, Uma Singh</i>	<i>Shakun Tyagi, Uma Singh</i>
88. Imaging Techniques in Gynecology.....440	90. Hysterectomy.....449
<i>Shakun Tyagi, Uma Singh</i>	<i>Shakun Tyagi, Uma Singh</i>

SECTION 12

UROGYNECOLOGY

- | | |
|--|---|
| <p>91. Pelvic Organ Prolapse.....457
Devender Kumar, Kalyani Nair</p> <p>92. Fistula—Genitourinary and Rectovaginal.....466
Devender Kumar, Ashika Mehta</p> | <p>93. Displacements of Uterus.....473
Devender Kumar, Monica Sharma</p> <p>94. Urinary Incontinence475
Niharika Dhiman, Leena Purain</p> |
|--|---|

SECTION 13

DISORDERS OF MENSTRUATION AND PUBERTY

- | | |
|--|---|
| <p>95. Amenorrhea, Hyperprolactinemia, and Galactorrhea.....485
Bidhisha Singha, Bandana Bharali</p> <p>96. Precocious Puberty489
Shikha Sharma, Neha Agarwal</p> <p>97. Dysmenorrhea.....492
Shikha Sharma, Neha Agarwal</p> | <p>98. Abnormal Uterine Bleeding.....496
YM Mala, Anuradha Sharma, Arushika Yedla</p> <p>99. Menopause and Management.....501
YM Mala, Vijaita Thakur, Arushika Yedla</p> |
|--|---|

SECTION 14

INFERTILITY

- | | |
|---|--|
| <p>100. Infertility.....509
Anjali Tempe, Meenakshi Karan, Priyanka Khandey, Abhilasha</p> <p>101. Polycystic Ovarian Syndrome519
Anjali Tempe, Parija Juneja</p> | <p>102. Endometriosis523
Renu Tanwar, Bhramita Roy, Naseema A</p> |
|---|--|

SECTION 15

BENIGN GYNECOLOGICAL DISORDERS

- | | |
|---|---|
| <p>103. Developmental (Mullerian) Anomalies of Female Genital Tract.....529
Reena Rani, Divya Gaur</p> <p>104. Disorders of Sexual Development.....536
Reena Rani, Divya Gaur</p> <p>105. Hirsutism.....539
Anjali Tempe, Parija Juneja</p> <p>106. Benign Lesions of Cervix541
Gauri Gandhi, Divya Singh</p> <p>107. Fibroid Uterus544
Madhavi M Gupta, Nitisha Verma</p> | <p>108. Disorders of Ovaries, Oviduct Physiological Enlargement and Adnexal Mass549
Renu Tanwar, Bhramita Roy</p> <p>109. Benign Ovarian Neoplasm.....551
Renu Tanwar, Bhramita Roy</p> <p>110. Disorders of the Broad Ligament.....556
Latika Sahu, Mitali Khatri</p> <p>111. Benign Lesions of Vulva and Vagina.....559
Chetna A Sethi, Divya KV</p> <p>112. Bartholin's Cyst.....563
Chetna A Sethi, Divya KV</p> |
|---|---|

SECTION 16

REPRODUCTIVE TRACT INFECTIONS

- | | |
|---|---|
| <p>113. Pelvic Inflammatory Disease.....567
Krishna Agarwal, Neha Khatri</p> <p>114. Vaginal Discharge.....569
Krishna Agarwal, Neha Khatri</p> | <p>115. Sexually-transmitted Infections.....571
Krishna Agarwal, Neha Khatri</p> <p>116. Female Genital Tuberculosis.....574
Krishna Agarwal, Neha Khatri</p> |
|---|---|

SECTION 17**GYNECOLOGIC ONCOLOGY**

- | | |
|--|---|
| <p>117. Overview of Gynecologic Cancers579
<i>Latika Sahu, Amrit Adarsh</i></p> <p>118. Hereditary Cancers in Gynecologic Oncology584
<i>Latika Sahu, Amrit Adarsh</i></p> <p>119. Premalignant Lesions of Cervix588
<i>Gauri Gandhi, Divya Singh</i></p> <p>120. Premalignant Lesions of the Vulva and Vagina593
<i>Chetna A Sethi, Divya KV</i></p> <p>121. Endometrial Hyperplasia595
<i>Madhavi M Gupta, Nitisha Verma</i></p> <p>122. Chemotherapy in Gynecologic Oncology597
<i>Latika Sahu, Kalyani Nair</i></p> <p>123. Radiotherapy in Gynecologic Oncology603
<i>Latika Sahu, Mitali Khatri</i></p> <p>124. Invasive Carcinoma Cervix607
<i>Latika Sahu, Reetu Yadav</i></p> | <p>125. Endometrial Carcinoma621
<i>Latika Sahu, Kalyani Nair</i></p> <p>126. Gestational Trophoblastic Neoplasia631
<i>Latika Sahu, Raj Rathod</i></p> <p>127. Ovarian Cancer637
<i>Latika Sahu, Raj Rathod</i></p> <p>128. Fallopian Tube and Peritoneal Cancer650
<i>Latika Sahu, Kalyani Nair</i></p> <p>129. Vulvar Cancer653
<i>Latika Sahu, Arpita Mohapatra</i></p> <p>130. Vaginal Cancer659
<i>Latika Sahu, Arpita Mohapatra</i></p> <p>131. Palliative Care661
<i>Latika Sahu, Amrit Adarsh</i></p> |
|--|---|

SECTION 18**GENERAL GYNECOLOGY**

- | | |
|--|--|
| <p>132. Hormones in Gynecology667
<i>Reena Rani, Sujata Bharadwaj</i></p> <p>133. Dyspareunia670
<i>Latika Sahu, Mitali Khatri</i></p> <p>134. Pelvic Pain672
<i>Neha Agarwal, Rachita Garg</i></p> | <p>135. Old Complete Perineal Tear676
<i>Chetna A Sethi, Divya KV</i></p> <p>136. Medicolegal Implications—Sexual Violence679
<i>Bidhisha Singha</i></p> |
|--|--|

SECTION 19**CONTRACEPTION**

- | | |
|---|---|
| <p>137. Temporary Methods of Contraception685
<i>Rachna Sharma, Naseema A, Ojaswini Sharma</i></p> | <p>138. Permanent Contraception694
<i>Rachna Sharma, Ojaswini Sharma</i></p> |
|---|---|

PART 3**EXAM PREPARATION****SECTION 20****OBSTETRICS**

- | | |
|--|---|
| <p>139A. MCQS in Obstetrics for CMSE/ Postgraduate Entrance Examination701
<i>Latika Sahu, Arpita Joshi, Amrit Adarsh</i></p> <p>139B. MCQs in Obstetrics for SS/FNB Entrance720
<i>Latika Sahu, Garima Mann</i></p> | <p>140. Objective Structured Clinical Examination in Obstetrics727
<i>Chetna A Sethi, Apoorva Hans</i></p> |
|--|---|

SECTION 21

GYNECOLOGY

- | | |
|--|--|
| <p>141A. Multiple Choice Questions in Gynecology for CMSE/Postgraduate Entrance Examination731
 <i>Latika Sahu, Naseema A, Amrit Adarsh</i></p> <p>141B. Gynecology MCQ for Entrance Examination for FNB/SS (Reproductive Endocrinology and Infertility).....749
 <i>Latika Sahu, Neha Chowdhary</i></p> | <p>141C. Multiple Choice Questions for SS/FNB Entrance Examination on Gynecologic Oncology755
 <i>Latika Sahu, Neha Chowdhary</i></p> <p>142. Objective Structured Clinical Examination in Gynecology.....767
 <i>Chetna A Sethi, Apoorva Hans</i></p> |
|--|--|

SECTION 22

INSTRUMENTS

- 143. Instruments771**
Latika Sahu, Raj Rathod

SECTION 23

DRUGS

- 144. Drugs Used in Obstetrics and Gynecology785**
Latika Sahu

SECTION 24

SPECIMENS

- 145. Specimens in Gynecology and Obstetrics.....793**
Chetna A Sethi, Latika Sahu

SECTION 25

CTG, PARTOGRAM, X-RAY, USG, ETC.

- 146. Partograph, Labor Care Guide, Cardiotocograph, HSG and USG.....801**
Bidhisha Singha, Jasmine, Vedika, Naseema A, Yasvi

- | | |
|---|---|
| <ul style="list-style-type: none"> • If patient desires surgical sterilization. • The hysterectomy is performed with molar tissue in situ. • If theca lutein cysts were found, they are decompressed by aspiration | <ul style="list-style-type: none"> • Bilateral ovaries are left in situ. • It is important to note that the hysterectomy doesn't reduce metastasis and the patients still need follow-up with hCG levels. |
|---|---|

Role of Prophylactic Chemotherapy

It is based on the principle that prophylactic chemotherapy prevents local uterine invasion and metastasis. However, it is unethical to expose all patients to toxic effects of the chemotherapy agents to prevent uterine invasion and metastasis as they occur in only 10% of cases. Therefore, it is concluded that prophylactic chemotherapy with actinomycin D must be reserved for high-risk patients (high pre-evacuation β -hCG levels, larger uterine size than expected for a given gestation, bilateral theca lutein cysts).

FOLLOW-UP

In all cases of miscarriage and abortions, the tissues obtained must be sent for histopathological examination. When not possible, all such patients must be followed up with urinary β -hCG levels after 3 months of the pregnancy event. This is done to identify persistent trophoblastic neoplasia in which there is persistently elevated β -hCG level. Both complete and partial mole have propensity to develop into persistent gestational trophoblastic tumor. Malignant

GTN occurs in 2.5–5% of partial mole where as it can occur in about 7–20 % after evacuation of complete mole. The average time to achieve first normal hCG level after evacuation is about 9 weeks in complete mole and about 7 weeks in case of partial mole. Pre-evacuation β -hCG levels are higher in complete moles and hence time for postevacuation β -hCG to become undetectable is also longer in complete moles. ACOG suggests to obtain hCG levels 48 hours postevacuation and then 1–2 weekly till levels are undetectable, then at 1–2 monthly interval for 6 months.

According to RCOG, **for complete mole**—if β -hCG levels return to normal within 56 days, follow-up till 6 months starting from the day of evacuation. If β -hCG returns to normal after 56 days, then the follow-up must be for 6 months starting from the time when the hCG levels became normal.

For partial molar pregnancy: Follow-up is done until β -hCG levels are normal on 2 samples at least 4 weeks apart. When the β -hCG values become plateau over several weeks or $\uparrow$, then she should be diagnosed a postmolar GTN and must be evaluated for metastasis and be managed accordingly.

CONTRACEPTION

It is advised to avoid pregnancy for 6 months after the negative β -hCG titer. COC pills are contraceptive of choice. They inhibit LH surge and thereby inhibit ovulation. This mechanism is helpful in a setting of molar pregnancy as the LH structural homology with the β -hCG may give false positive reading. **COCp, POP, DMPA: WHO MEC 1, CuT IUCD, LNG-IUS: WHO MEC 3.**

SECTION

4

Late Antenatal—Maternal-Medical Disorders

- ☐ Hypertensive Disease of Pregnancy
- ☐ Diabetes Mellitus in Pregnancy
- ☐ Heart Disease in Pregnancy
- ☐ Anemia in Pregnancy
- ☐ Thyroid Disorder in Pregnancy
- ☐ Epilepsy in Pregnancy
- ☐ Liver Disease in Pregnancy
- ☐ Pregnancy with Renal Tract Disorder
- ☐ Respiratory Diseases in Pregnancy
- ☐ Antiphospholipid Antibody Syndrome and Thrombophilias in Pregnancy
- ☐ Disseminated Intravascular Coagulation in Pregnancy
- ☐ Thrombocytopenia in Pregnancy
- ☐ Dyspnea in Pregnancy
- ☐ Autoimmune Diseases in Pregnancy: Systemic Lupus Erythematosus/Rheumatoid Arthritis