Contents

1. Instruments and Scanning Techniques **1**

- History 1
- Basics of 3D Ultrasound 1
- Defocusing Lens Method 1
- Volume Visualization and Computer Processing 2
- Real Time 3D or 4D Imaging 3
- Kretz (Voluson) Technique 3
- How to do 3D Step by Step? 5

2. Normal Pelvic Anatomy by Ultrasound **7**

- Normal Pelvic Anatomy 7
- Uterus 7
- 3D Evaluation of Uterus 12
- Fallopian Tubes 12
- Ovarian Anatomy 12

3. Uterine Lesions by 3D **23**

- Uterine Disorders 23
- Advantages of 3D in Uterine Lesions 23
- Specific Uterine Lesions 23
- Endometrium and Endometrial Cavity 48
- Cavity Evaluation 53
- 3D in Mullerian Anomalies 53
- Ultrasound Imaging for Septate Uterus 55
- Evaluation of Case of BOH/RSA for Uterine Anatomical Factors 55
- IUCD 55
- 3D-Hysterosonography and Sonosalpingography 60

4. Adnexal Lesions by 3D **63**

- Miscellaneous Gyne Problems 63

5. TVS-3D for Infertility Evaluation **77**

- TVS-3D Evaluation of Infertile Woman 77

6. Early Pregnancy **81**

- Gestational Sac at Five Weeks 81
- Six Weeks 87
- Seven Weeks 87
- Eight Weeks 100
- Nine-Ten Weeks 100
- Eleven-Twelve Weeks 103
- Eleven to Fourteen Weeks Scan by 3D 104
- 3D PD for Assessing Embryonic Vascularity 104
- Five Weeks 104
- Six Weeks 105

- Seven Weeks 105
- Eight Weeks 105
- Nine-Ten Weeks 105
- Eleven-Twelve Weeks 105

7. Fetal Anatomy in Mid and Late Pregnancy Fetal Malformations 107

- 3D of Fetal and Neonatal Brain 107
- 3D/4D Fetal Brain 107
- Prenatal Diagnosis 107
- Prenatal Diagnosis: Lession Learned 107
- 3D Technology 108
- Advantages of 3D Over Conventional 2D 108
- Ear Abnormalities 108
- CNS Anomalies 108
- Fetal Weight Estimation by 3D 108
- Nuchal Cord 108
- Limb Deformities 109
- Four Dimensions: The New Diagnostic Frontier 109
- 3D Power Doppler: Fetal Circulation 109
- 3D in Imaging Multifetal Pregnancy 109
- 3D PD USG of Fetal Heart 109
- 3D vs 2D 109
- Anencephaly 110
- Iniencephaly 111
- Lobar 112
- Agenesis of Corpus Callosum 113
- Dandy-Walker Malformation 113
- Ventriculomegaly 114
- Cleft Lip and Palate 115
- Micrognathia 117
- Nasal Bone 118
- Teratoma 119
- Sacrococcygeal Teratoma 119
- Diastematomyelia 120
- Congenital Diaphragmatic Hernia 122
- Congenital High Airway Obstruction/Laryngeal Atresia/Tracheal Atresia 122
- Cardiac Abnormalities 124
- Splenomegaly 124
- Duodenal Atresia 125
- Omphalocele 126
- Hepatomegaly and Hepatic Calcification 127
- Hydronephrosis 128
- Clubfoot 129
- 3D of Fetal Lung 130

Index *131*