



Screening in Obstetrics & Gynecology

Management of Abnormality

Editor

Alka Pandey

Co-editor

Navneet Magon



Federation of Obstetric & Gynaecological Societies of India

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Editor

Alka Pandey MD PhD FICOG
Assistant Professor
Department of Obstetrics and Gynecology
Patna Medical College
Patna, Bihar, India

Chairperson
Practical Obstetric Committee—FOGSI (2015–2017)

Co-editor

Navneet Magon MBBS FCCP MS
Head, Department of Obstetrics and Gynecology
Air Force Hospital
Jorhat, Assam, India
National Coordinator
Medical Disorders in Pregnancy Committee—FOGSI

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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 20 3170 8910
Fax: +44 (0)20 3008 6180
Email: info@jpmcdpub.com

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

Jaypee Brothers Medical Publishers (P) Ltd
Bhotahity, Kathmandu, Nepal
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CONTENTS

1. Maternal Red Blood Cell Group and Antibody Screen	1
<i>Asha Rijhsinghani</i>	
Other Red Cell Antibodies	1
Clinical Considerations in an at-risk RhD Negative Pregnancy	3
2. Antepartum Assessment of Hemoglobin, Hematocrit and Serum Ferritin	5
<i>Joydev Mukherji, Monika Anant</i>	
Supplementation to Prevent Anemia	10
Treatment of Anemia	11
Parenteral Iron	11
Blood Transfusion	12
Delivery Care	13
3. Asymptomatic Bacteriuria	15
<i>Geetha Balsarkar</i>	
Asymptomatic Bacteriuria during Pregnancy	15
Asymptomatic Bacteriuria in Non-pregnant Patients	20
4. Screening for Hepatitis A, B, C and E during Pregnancy	21
<i>Vijay Prakash, Ameet Kumar Banka</i>	
Hepatitis B Virus	21
Hepatitis C Virus	22
Hepatitis E Virus	23
Hepatitis A Virus	23
5. First Trimester Screening for Fetal Aneuploidy	25
<i>Neeta Singh</i>	
Background Risk	25
Nuchal Translucency	28
Serum Biochemical Markers	29
Reporting Risks	31
Noninvasive Prenatal Testing (NIPT)	31
6. Genetic Sonogram	35
<i>Ashok Khurana</i>	
Definition and Background	33
Sonographic Markers for Down Syndrome (Trisomy 21)	35
Sensitivity of Marker Detection	37
Significance of Individual Markers	37
Trisomy 18 (Edward Syndrome)	39

Trisomy 13 (Patau Syndrome)	39
Turner Syndrome (Xo)	39
Triploidy	39
7. Ultrasound Detection of Structural Abnormalities in the First Trimester: Always Detectable 9	43
<i>Shettikeri A, Radhakrishnan P</i>	
Head and Brain	43
Anterior Abdominal Wall Defects	46
8. Thrombophilia in Pregnancy	51
<i>Girija Wagh</i>	
Mechanisms of Adverse Pregnancy Outcomes Associated with Thrombosis and Thrombophilia	51
9. Gestational Diabetes Mellitus	59
<i>Navneet Magon, Monica Chauhan, Babu KM</i>	
Relevance in India	59
Definition	59
Diagnostic Criteria	59
Glycemic Goals in Pregnancy	62
Medical Nutrition Therapy	62
10. Fundal Height Measurement	67
<i>Muhunthan K, Arulkumaran S</i>	
Technique of Symphysio-fundal Height Measurement	67
Detection of Intrauterine Growth Restriction and Small-for-Gestational Age	68
Timing and Frequency of Symphysis Fundal Height Measurement	68
Patient Selection	68
Method of Measuring	69
Recording	69
Further Evaluation	70
Estimation of Birth Weight and Gestational Age	70
11. Management of Fetal Growth Restriction by Doppler Velocimetry	72
<i>Prashant Acharya, Shalin Sah, Hriday Acharya, Foram Acharya, Ashini Acharya</i>	
Indices for Understanding Fetal Hemodynamics	73
Changes in the Vasculature	74
Prediction of Pre-eclampsia and FGR	85
12. Fetal Growth Restriction	92
<i>Jyothi Unni</i>	
Etiology	92
Screening	92
Diagnosis	93
Management	94
Surveillance	94
Timing of Delivery	94

Mode of Delivery	95	
Neonatal Effects	95	
Long-term Effects	95	
Prevention	95	
13. Screening for Spontaneous Preterm Labor and Delivery		96
<i>Shanti Roy, Shipra Roy, Sharika Roy</i>		
Numerical Scoring	97	
Biochemical Markers	98	
14. Screening for Fetal Hypoxia		101
<i>K Aparna Sharma</i>		
Antepartum Assessment	101	
Intrapartum Fetal Assessment	105	
15. Screening in Menopause		112
<i>Duru Shah, Anu Vij</i>		
Obesity	113	
Cardiovascular Disease	114	
Risk Assessment Tools	114	
Osteoporosis and Arthritis	115	
Osteoarthritis	118	
Cognitive Decline and Dementia	118	
Screening for Cancers	119	
Metabolic Syndrome	120	
16. Screening Tests in Contraceptive Users		123
<i>Alokendu Chatterjee, Sebanti Goswami</i>		
Screening Tests in Contraceptive Users	123	
17. Genetic Predisposition to Gynecological and Breast Cancers		126
<i>Neha Kumar, Amita Maheshwari</i>		
Genetic Counseling	128	
Management of HBOC Syndrome	129	
Reproductive Options	131	
18. Screening for Cervical Cancer		135
<i>Partha Basu, Sujoy Das Gupta, Priyanka Singh</i>		
Natural History of Cervical Precancer and Cancer	136	
Screening Techniques for Cervical Cancer	138	
Cervical Cancer Screening Guidelines	140	
Role of Colposcopy and Histology in Screening	141	
Overview of Treatment of Cervical Pre-cancer	142	
Overview of Management of Invasive Cancer Cervix	144	
Treatment	145	

19. Screening for Ovarian Cancer	147
<i>SK Giri, BL Nayak</i>	
Risk Factors for Ovarian Cancer	147
Ovarian Cancer Risk Types	148
WHO Screening Criteria in Ovarian Cancer	149
Evidence of Benefit or Lack of Benefit Associated with Different Screening Modalities	150
Risk of Ovarian Cancer Screening	155
Disadvantages of Genetic Testing for Breast Cancer Genes	156
20. Screening for Thyroid Disorders in Pregnancy	160
<i>D Maji</i>	
Pathophysiology	160
Hypothyroidism	162
Thyroid Autoantibodies in Pregnancy	163
Isolated Hypothyroxinemia	163
Screening for Thyroid Disorders during Pregnancy	163
Hyperthyroidism	163
Postpartum Thyroiditis	165
21. Screening for Hemoglobinopathy	168
<i>Alka Pandey, Charu Modi</i>	
Inheritance	168
Incidence	168
Types of Hemoglobinopathies	169
Screening for Hemoglobinopathies	171
22. Breast Cancer Screening: Current Status	175
<i>Vijay Pratap Singh, Pritanjali Singh</i>	
Epidemiology	175
Risk Factors	176
Strategies for Screening	176
Family History of Breast Cancer	179
Trade-offs Between Benefits and Harms	180
Recommendations for Screening by Expert Groups	180
23. Peripartum Coagulopathy	184
<i>Shyamal Sett</i>	
Platelet Disorders	185
Inherited Coagulation Defects	187
Hemophilias	187
Von Willebrand Disease (VWD)	188
Other Inherited Coagulation Factor Deficiencies	189
Thrombophilias	190
Gestational Hypertension	190
Acute Fatty Liver of Pregnancy	192
Intrauterine Fetal Death and Delayed Delivery	192

Placental Abruption	193	
Amniotic Fluid Embolism	193	
Sepsis Syndrome	194	
Dilutional Coagulopathy	196	
24. Screening for Postpartum Anemia		199
<i>Meena Samant</i>		
Disease Load	199	
Functional Consequences	200	
Who Should be Screened	200	
<i>Index</i>		205

10

CHAPTER

Fundal Height Measurement

Muhunthan K, Arulkumar S

INTRODUCTION

Assessment of fundal height has been part of antenatal care of a pregnant woman with an aim of detection of intrauterine growth-restricted (IUGR), small-for-gestation (SGA), fetal macrosomia, multiple pregnancies, estimation of birth weight and for estimating the gestational age of the pregnancy.¹

It includes palpation to estimate the size of the uterus against some basic anatomical landmarks, or measurement by callipers or by centimeter tape.²

A nonpregnant uterus is a pelvic organ and is not palpable abdominally. From its original pear shape, the uterus assumes a globular shape as the pregnancy advances. It becomes palpable abdominally by 12 weeks as it is too large to remain totally within the pelvis. From this point onwards it can be palpated and measured as it is in contact with the anterior abdominal wall in Figure 10.1. By term it almost reaches the liver and this exponential enlargement of the uterus displaces the bowels laterally and superiorly. In supine position it rests on the vertebral column and the adjacent great vessels, especially the inferior vena cava and aorta. It also undergoes dextrorotation which is likely to be caused by the rectosigmoid on the left side of the pelvis.

TECHNIQUE OF SYMPHYSIO-FUNDAL HEIGHT MEASUREMENT

Palpation to estimate the size of the uterus against some basic anatomical landmarks has largely been replaced by the more objective method of measurement of symphysiofundal height (SFH).

It can be achieved using a non-elastic centimeter tape while the expectant mother is



Fig. 10.1: Height of the uterus at various weeks of pregnancy

METHOD OF MEASURING

Standardized techniques and protocols are required to ensure accuracy, with regular training, assessment and accreditation as with any clinical investigation.

Serial measurements need to be done, preferably by the same care provider or restricting assessments to one or two carers to significantly improve the accuracy.⁹

A training and accreditation program in customised fetal growth assessment with evidence-based protocols was associated with a reduction in stillbirths in high-uptake areas and resulted in a national drop in stillbirth rates to their lowest level in 20 years in the UK.¹⁰

RECORDING

In addition to recording fundal height as a number it must be plotted in a chart as it provides a graphical representation.

The charts used may be standard charts or customised charts. The birth weight and fundal height varies with constitutional variables such as maternal weight and parity and using customised charts can adjust this variation in the normal curve according to maternal height, weight, parity and ethnic group, along with the variation for birth weight¹¹ (Fig. 10.2).

Studies also suggest that customised SFH charts may improve the detection of a SGA neonate by observing a SFH falling below the

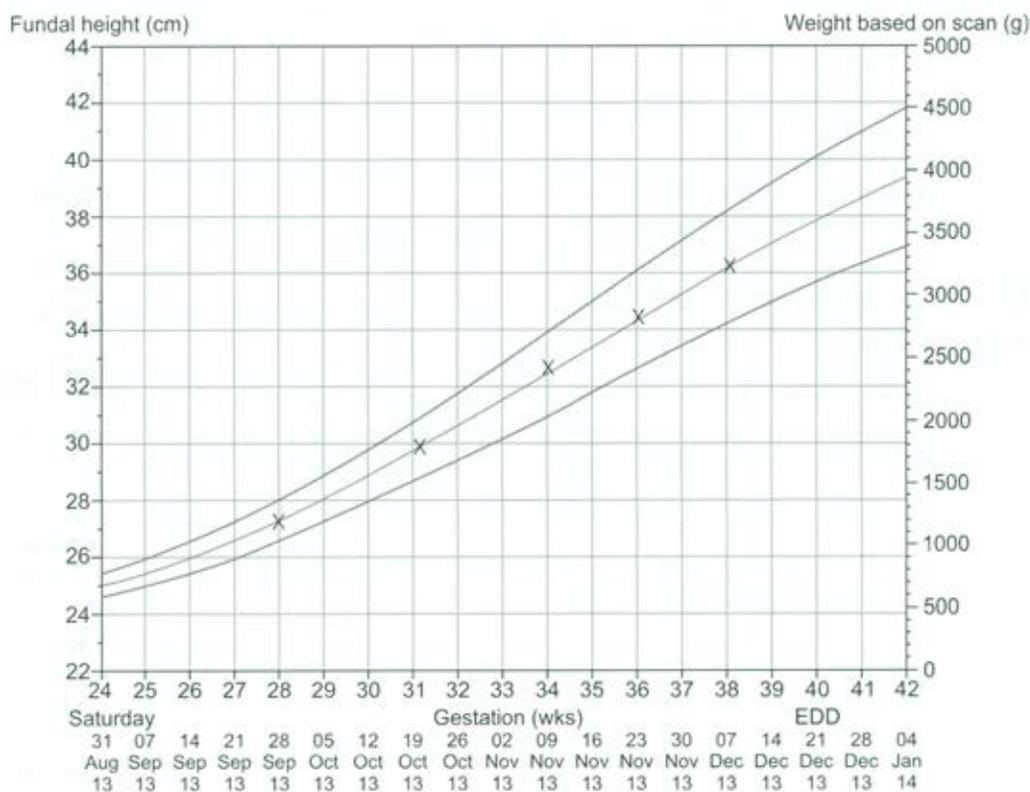


Fig. 10.2: Example of a customised SFH chart with a normal growth pattern

Source: 'West midlands perinatal institute'