ASCeXAM Content Outline

I. Physical Principles, Instrumentation, Examination Principles

A. Routine Doppler Examination
B. Transesophageal Echocardiography, Intraoperative Echocardiography, and Catheter-Based Echocardiography (ICE)
C. Physical Principles of Ultrasound
D. Cross-Sectional Echocardiographic Examination
E. Principles of Doppler Flow Measurement
F. Cross-Sectional Scanning: Technical Principles and Instrumentation
G. Standard Plane Positions – Standard Imaging Planes
H. Doppler Instrumentation
I. Principles of Flow
J. Principles of Color Flow Mapping
K. M-Mode Echocardiography
L. Digital Image Processing
M. Doppler Signal Processing, Tissue Characterization
N. Three-Dimensional Echocardiography
O. Place (Role) of Echocardiography
P. Hand-Held Echo
Q. Laboratory Accreditation

II. Valvular Heart Disease

A. Aortic Valve, Aorta, and Subvalvular Outflow Tract
B. Mitral Valve
C. Echo-Doppler Assessment of Prosthetic Heart Valves
D. Echocardiographic Findings in Infective Endocarditis
E. Fluid Dynamics of Regurgitant Jets
F. Tricuspid Valve
G. Pulmonic Valve
H. Pulmonary Hypertension

III. Chamber Size and Function

A. Coronary Artery Disease, Stress Echocardiography
B. General Considerations, Assessment of Chamber Size and Function
C. Echocardiographic Assessment of the Cardiomyopathies
D. Diastolic Function
E. Left Atrium, Pulmonary Veins, and Coronary Sinus
F. Right Ventricle
G. Right Atrium
H. Interatrial and Interventricular Septum
I. Inferior and Superior Vena Cava
J. Doppler Estimation of Volumetric Flow
K. Coronary Arteries

IV. Congenital Heart Disease

A. Complex Congenital Heart Disease
B. Aortic Valve, Aorta, and Subvalvular Outflow Tract
C. Tricuspid Valve Anomalies
D. Mitral Valve
E. Doppler Estimation of Volumetric Flow
F. Pulmonic Valve Anomalies
G. Coronary Arteries Anomalies
H. Fetal Echocardiography
I. Terminology and Anatomic and Physiologic Basis of CHD
J. Principles of Medical and Surgical Management
K. Echo Evaluation of Post-Op Congenital Heart Disease

V. Cardiac Masses, Pericardial Disease, Contrast and New Applications

A. Pericardial Disease
B. Cardiac Tumors and Masses
C. Contrast Echocardiography
D. Assessment of Myocardial Perfusion with Contrast
E. Echocardiography in Disorders of Cardiac Rhythm and Conduction
F. Echocardiography in Cardiac Transplantation

VI. Miscellaneous Topics (Role of Echo)

A. Heart Failure
B. Cardiac Sources of Embolism (PFO, ASA, SEC, Aortic Atheroma, etc)
C. Pulmonary Heart Disease
D. Systemic Diseases
E. Atrial Fibrillation
F. Trauma
G. Athlete's Heart
H. Aging Changes
I. Pregnancy
J. Interventional Echocardiography
K. Digital Lab
L. Quality in the Echo Lab

Reference Statement

NBE does not endorse or recommend any third-party review course or material. Any text in cardiovascular techniques and evaluation, cardiac patient care and management may be used. Current standards and guidelines endorsed by professional societies are also appropriate.

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