WHO TO REFER FOR AN ECHOCARDIOGRAM

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HEART FAILURE SOCIETY OF SOUTH AFRICA
According to the “Guidelines for Appropriateness Criteria for Transthoracic Echocardiography” issued by ACC and ASE in 2007

JASE 2007; 20; 7:787-805
Echocardiography is a highly versatile technique, uniquely informative about cardiac structure and function, cost-effective and non-invasive.

Purpose:

- To **screen** a subject for the possibility of disease
- To **investigate** symptoms or abnormal physical findings
- To **evaluate** a known or suspected clinical condition
SCREENING

- Patients with features of Marfan Syndrome and related connective tissue diseases
- Potential donors for cardiac transplantation
- First-degree relatives of patients with hypertrophic cardiomyopathy
- First-degree relatives of patients with dilated cardiomyopathy of unknown etiology
Patients undergoing chemotherapy with cardiotoxict agents, baseline and re-evaluation

Routine screening for participation in competitive sports in athletes without evidence of heart disease

Patients with systemic autoimmune diseases that may involve the heart

Patients with history of anorectic drug use
DIABETES MELLITUS

- **Routine** echocardiogram for **pre-clinical** diabetic cardiomyopathy
- **Left ventricular systolic/diastolic dysfunction**
- **Left ventricular hypertrophy**
  
  *Independent of Coronary Artery Disease and Hypertension*

*Eur J Heart Failure June 2010*
INVESTIGATE AND EVALUATE

CHEST PAINS

- Wall motion abnormalities
- Evaluation of ventricular function
- Valvular aortic stenosis
- Hypertrophic cardiomyopathy
- Pulmonary embolism
SYNCOPE

- Underlying structural heart disease
  - Severe aortic stenosis
  - Cardiomyopathy
  - Systolic dysfunction
  - Obstructive cardiac tumours or thrombi
  - Aortic dissection
  - Pericardial tamponade
PALPITATIONS

- Left ventricular systolic dysfunction
- Mitral valve prolapse
- Congenital heart disease
  - ASD
  - Ebstein’s anomaly
  - Tetralogy of Fallot
CARDIAC MURMUR

- Valvular regurgitation
- Valvular stenosis
- Hypertrophic obstructive cardiomyopathy
- Ventricular septal defect

NEW CARDIAC MURMUR

- Infective endocarditis
CARDIOMEGALY

- Dilated cardiomyopathy
- Pericardial effusion
- Specific chamber enlargement

ABNORMAL ECG FINDINGS

- Arrhythmias
- Conduction disturbances
- Left ventricular hypertrophy
- ST/T changes
DYSPNOEA AND OEDEMA

Echocardiography: single most useful tool for diagnosis, aetiology, risk stratification, monitoring treatment response in Heart Failure

- Cardiac anatomy: volumes, geometry, mass
- Wall motion abnormalities
- Valvular function
- Left Ventricular systolic dysfunction
  - LVEF/Global longitudinal strain
- Left ventricular diastolic dysfunction
HYPERTENSION

- Echocardiogram **routinely** in all patients
- Estimation of **total cardiovascular risk**
- Identification of **subclinical target organ damage**
  - Left ventricular hypertrophy (**concentric**)
  - Left ventricular systolic/diastolic function
CARDIOVASCULAR EVALUATION IN ACUTE SETTING

- Hypotension or hemodynamic instability
- Acute chest pain
- Respiratory failure
- Acute embolism/Pulmonary embolism
- Cerebrovascular event/Stroke
  - Patent Foramen Ovale
  - Atrial septal aneurysm
THANK YOU