



## Diagnosis of CAD

### Electro Cardio Gram (ECG)

- One of the simplest bedside test
- Shows electrical activity of heart. Patient can have normal ECG and abnormal heart or abnormal ECG and normal heart; therefore, patient may require further test in spite of normal ECG. It is useful for diagnosis of coronary artery disease.



### Echocardiography

- Based on principle of Ultrasound.
- Gives important Information about structure and function of heart.
- Helps to assess valve structure and their abnormalities.
- Gives information about the function of valves and severity of valve disease.
- Overall effectiveness of pumping of heart for medical or surgical treatment.

*Limitation Cannot show Coronary Arteries*



### TMT (Stress test) Tread Mill Test

- Performed on OPD basis
- Patient exercises on a treadmill under supervision of a physician and his/her ECG is monitored continuously, In addition blood pressure and symptoms are also monitored.
- ECG changes detected during stress test can clinch the diagnosis of Coronary Artery Disease (CAD).

Limitations

- Significant number of false positive and false negative tests
- This can just suggest possibility of Coronary Artery Disease

## **Coronary Angiography (CAG)**

- Invasive test
- Generally requires 24 Hrs of hospitalization
- Procedure is performed in Cath Lab
- Carries a negligible amount of risk of complications

### **The Procedure**

- Light sedation may be given
- Patient remains awake in order to respond to various instructions ("take a deep breath and hold your breath", "cough", etc.)
- The access for Angiography is acquired through an artery in groin called femoral artery
- Coronary Angiography can also be performed through arteries of Upper Limb when the access is not possible through groin because of various conditions. When viewed in motion under Xrays, reveals any obstructions or plaques located within the coronary vessels.
- This procedure also helps in recording pressures Inside the heart and allows assessment of left Ventricular function.

The procedure is then stored on a CD or a Video Cassette.