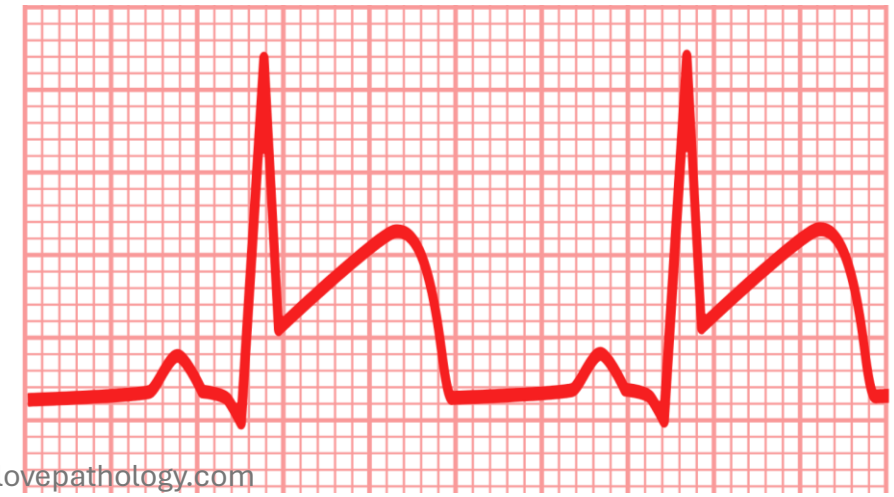
MYOCARDIAL INFARCTION

DIAGNOSIS

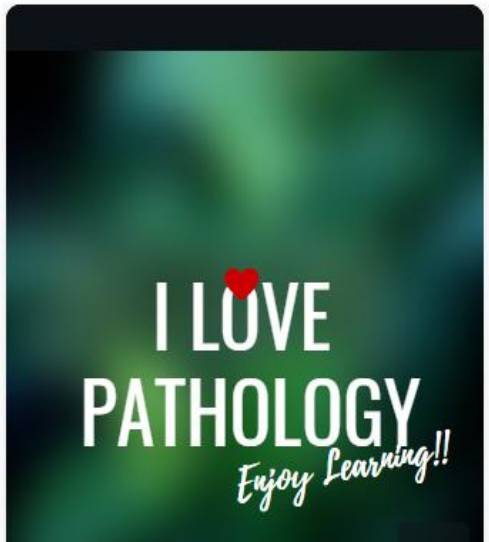


WHY PATHOLOGY?

CATEGORIES

Select Category

ILOVEPATHOLOGY



Myocardial Infarction- Diagnosis

Clinical features

Lab diagnosis

ECG findings

Myocardial Infarction- Diagnosis

Clinical features

Lab diagnosis

CHEST PAIN

Prolonged - > 30 min

Crushing, stabbing, or Squeezing

Rapid, weak pulse.

Involvement of the posterior inferior ventricle with secondary vagal stimulation

Profuse sweating (diaphoresis), and nausea and vomiting

Myocardial Infarction- Diagnosis

Clinical features

Lab diagnosis

ECG findings

Impaired contractility of the ischemic myocardium → resultant pulmonary congestion & edema → DYSPNEA

Myocardial Infarction- Diagnosis

Clinical features

Lab diagnosis

ECG findings

25% of patients

Onset can be entirely asymptomatic

In the setting of Diabetic neuropathy

Myocardial Infarction- Diagnosis

Clinical features

Lab diagnosis

ECG findings

Demonstrate blood levels of proteins that leak out of irreversibly damaged myocytes

Cardiac-specific troponins

Troponins T and I (cTnT and cTnI)

Proteins that normally regulate calcium-mediated contraction of cardiac muscle

Myocardial Infarction- Diagnosis

Clinical features

Lab diagnosis

ECG findings

Factors affecting serum troponin levels

Volume of damaged myocardium

Blood flow and lymphatic drainage in the area of the infarct

Rate of elimination of the marker from the Blood.

Myocardial Infarction- Diagnosis

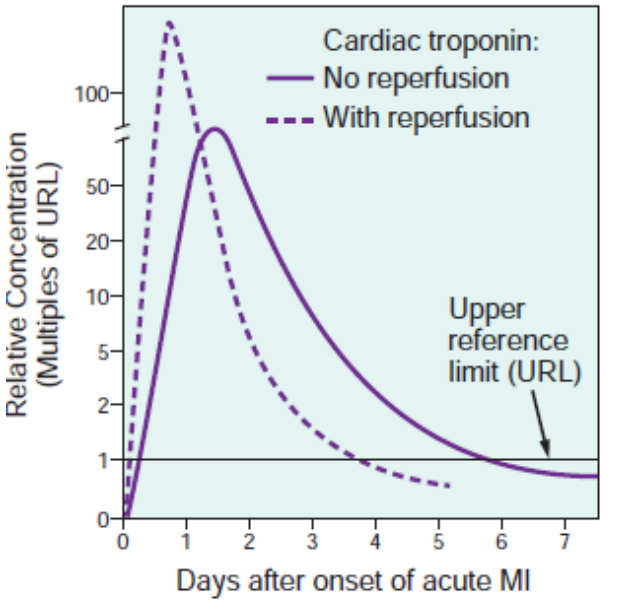
Clinical features

Lab diagnosis

Troponin levels

begin to rise in 2 to 4 hours

peak at 24 to 48 hours



4. Biomarker for diagnosis of myocardial infarction

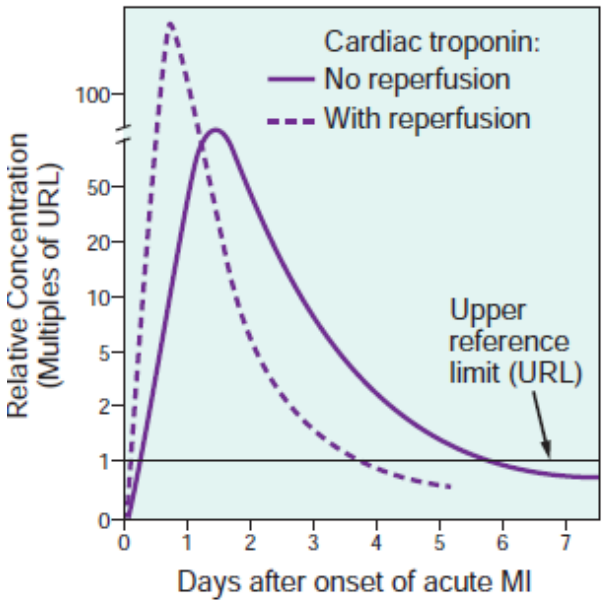
Myocardial Infarction- Diagnosis

Clinical features

Lab diagnosis

ECG findings

Effect of reperfusion on Troponin levels



4. Biomarker for diagnosis of myocardial infarction

ilovepathology.com

Troponin levels may be higher and peak earlier

Due to rapid washout of the marker from the necrotic tissue

Myocardial Infarction- Diagnosis

Clinical features

Lab diagnosis

ECG findings

Other conditions where troponin levels are increased

Myocarditis, myocardial trauma,

Congestive heart failure, pulmonary embolus, renal failure, and sepsis

DO NOT usually follow the same abrupt-injury time course

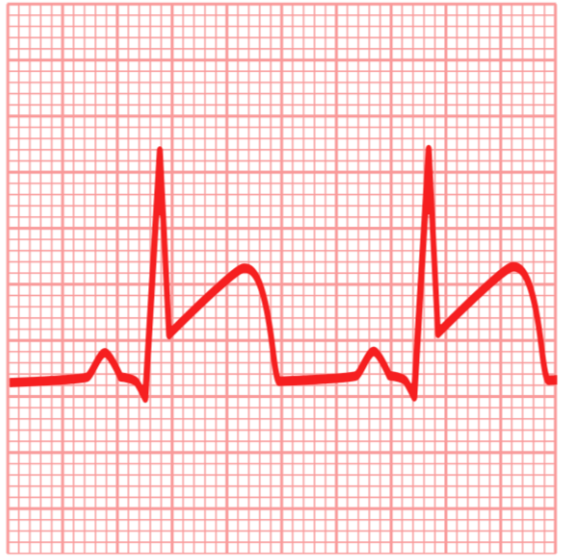
SERIAL MEASUREMENTS

Myocardial Infarction- Diagnosis

Clinical features

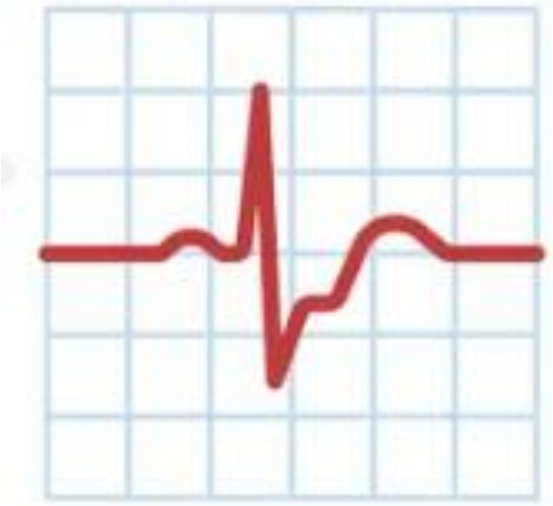
Lab diagnosis

ECG findings



Transmural infarct

ST-elevation myocardial infarct (STEMI)



Subendocardial infarct

Non ST-elevation myocardial infarct (NSTEMI)

Myocardial Infarction- Diagnosis

Clinical features

Lab diagnosis

ECG findings

THANKS FOR WATCHING