

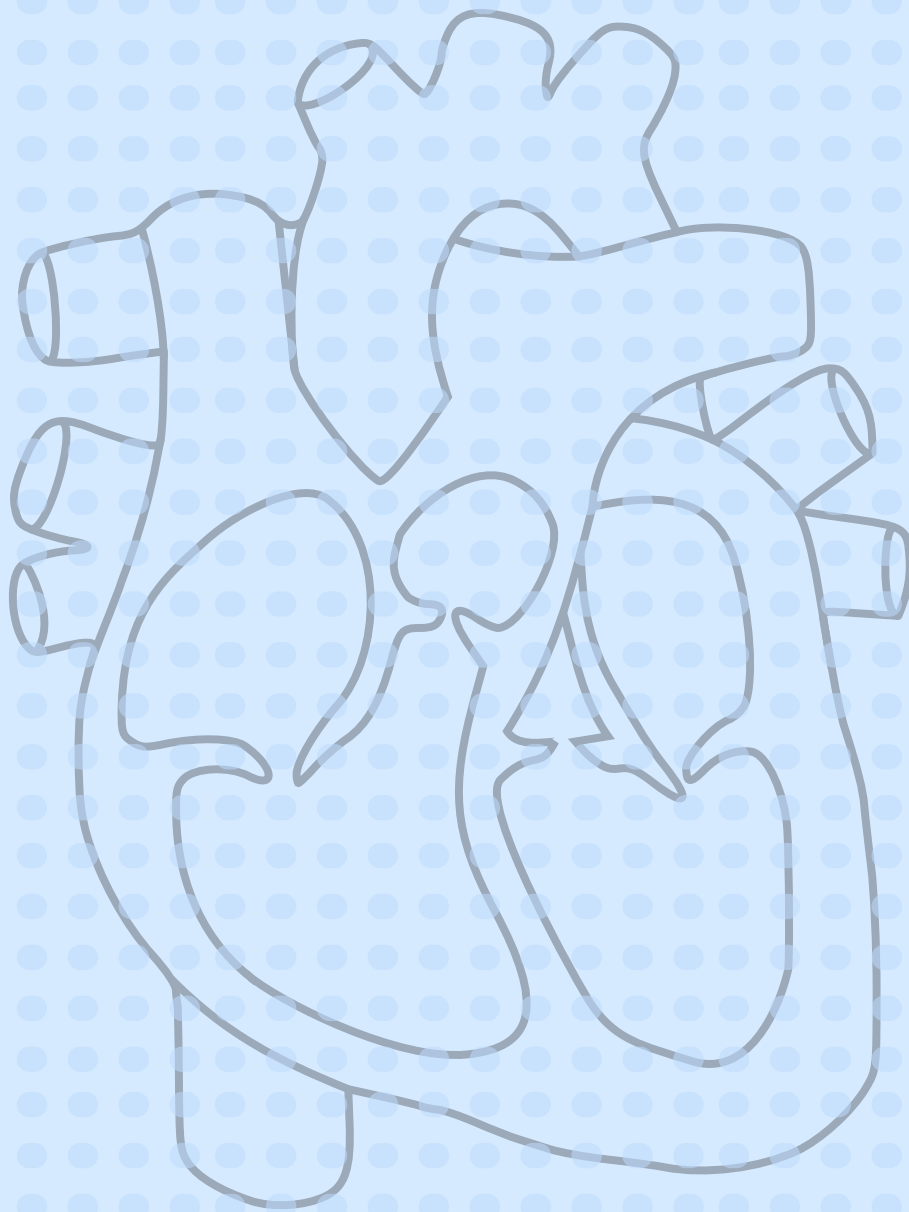
acute coronary syndrome

Blood supply of Heart:

Main Blood supply from Aorta
Right and Left Coronary Arteries
LCA - Left circumflex Artery and
Left anterior descending Artery

CELL DEATH:

when muscle cells die there must be something released in blood. We know that a cardiac muscle cell is made up of myosin and actin which are important in muscle contraction. Actin got Troponin on it to help in contraction. The ENzymes around that area (CK-MB) are the energy needed for transport through ATP n cells. So when the cardiac muscle cells die, Troponin and CKMB get released in circulation. This can be measured to see whether necrosis has occurred Troponin levels rise about day 2 after chestpain, before dropping down. CK-MB rise rapidly but not as high as troponin but falls faster.



= Reduction of Blood Supply

Plaques in Coronary Arteries (Lipids)
due to non modifiable factors

- increased age
- male sex
- family history
- Ethnicity

Plaques in Coronary Arteries

- Reduction of Blood Flow to the area to cardiomyocytes
- leading to poor oxygen supply
- causes symptoms like angina, chest pain
- while exerting yourself, heart needs more oxygen = more blood supply

Angina

Stable = no chest pain in rest
unstable = chest pain when resting
Unstable Angina has Normal/T-wave depression
a reduction of blood supply to heart muscle as a
result of plaque and ischemia to muscle wall but
there is no infarction at rest

STEMI

ST ELEVATION

means a complete occlusion of the
coronary arteries
and those muscles undergo necrosis
because there is no Blood supply to
myocardium, which also is called
coagulative necrosis
we have also a rupture and damage
of papillary muscles

NSTEMI

ST DEPRESSION

significant occlusion of the artery
we have a rupture of plaque, thrombosis
due to poor oxygen supply
but in NSTEMI the artery is not fully
occluded
significant reduction causes infarction
distally and ischemia proximally to artery
supply = subendocardial infarction =
infarcted area

Treatment:

STEMI = percutaneous coronary
intervention (Fastest way) or
Fibrinolytic therapy breaking down
thrombolysis

Treatment:

NSTEMI = Risk stratification for low risk patients
some cardiac enzymes, troponine ECG
and for high risk patients Antiplatelets,
anticoagulative therapy and some beta
blockers