Treatment of Ischemic Heart Disease

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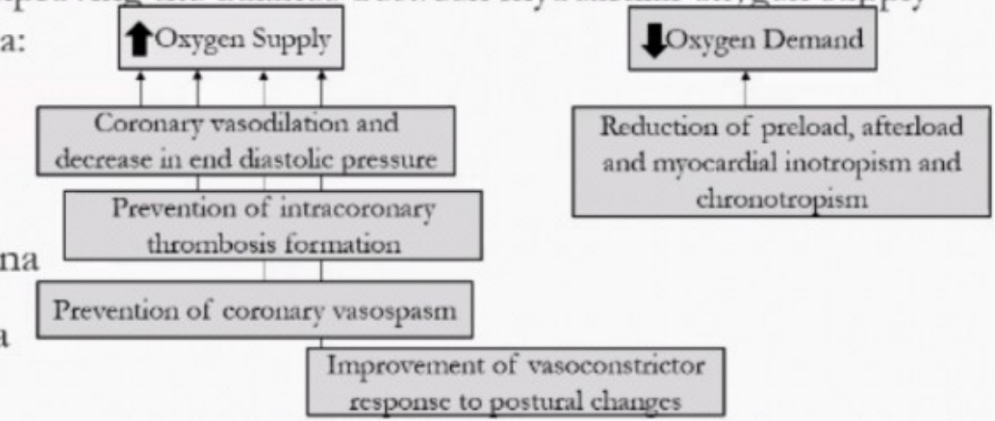
Main Goals of Antianginal Therapy

Restoring or improving the balance between myocardial oxygen supply and demand via:



Stable angina

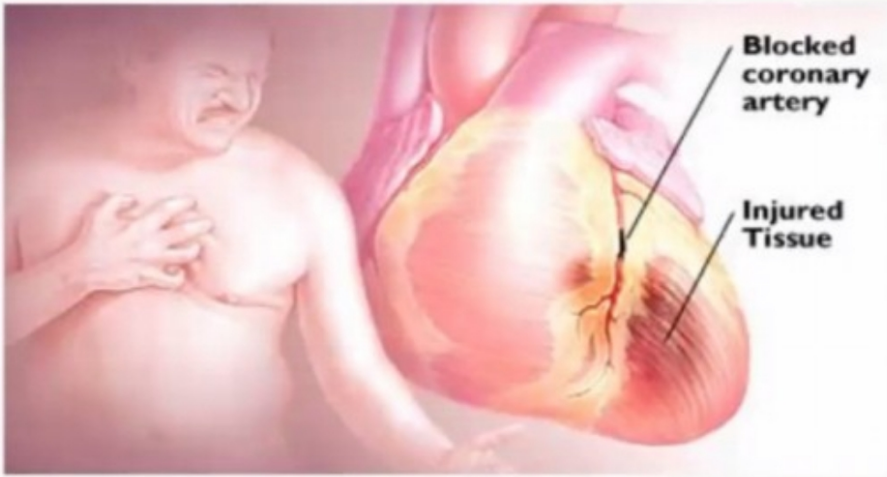
Unstable angina

Variant angina

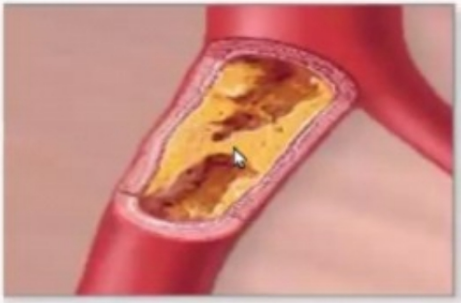
Achievable Goals of Antianginal Therapy

- Prophylactic treatment by preventing triggering stimuli
- Treatment of symptoms during anginal attack
- Reduction of possible morbidity and mortality intrinsic to the disease
- Treatment of cardiac risk factors to reduce progression or even make to regress coronary atherosclerotic lesions
- Removal of the cause of angina by coronary artery bypass atherectomy, balloon coronary artery dilations (PTCA)

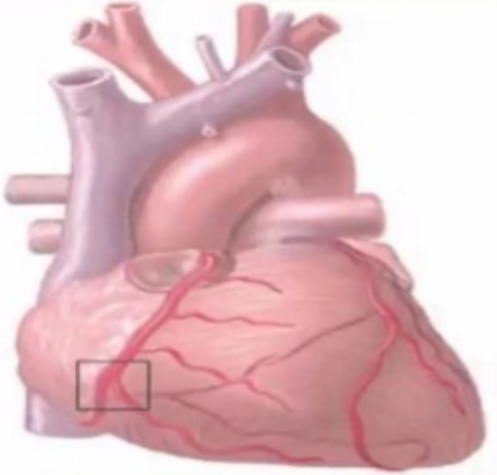
Coronary Artery Disease and Hyperlipidemia



Atherosclerosis



Blockage in right coronary artery



Long term Goals of Therapy

- Prevent myocardial infarction and sudden cardiac death.
- Prevent additional damage.
- Reverse the atherosclerosis.

Available Drugs to Treat Angina Pectoris

- Organic nitrates
- Calcium channel blockers
- Potassium channel openers
- β-adrenoceptor antagonists
- Antiplatelet and antithrombotic agents

Drug treatment of Ischemic Heart Disease

- ANGINA PECTORIS
- Tab Angised (nitroglycerine) 0.5mg

  1 tab under the tongue, just as pain starts

  Repeat after 5 minutes if pain not relieved

  Contact doctor if pain is not relieved after third tablet
- Tab Dispirin (Aspirin) 300mg

  Half tablet once daily after meal
- Tab Isordil (Isosorbide Dinitrate) 10mg

  one tablet 8 hourly

If not controlled

- Tab Angised (Nitroglycerine) 0.5mg
  one tablet as above
- Tab Dispirin (Aspirin) 300mg
  Half tablet once daily after meals
- Tab Isordil (Isosorbide Dinitrate) 10mg -8 hours
  increased to 10mg -2 tablets 8 hours if required
- Tab Herbesser (Diltiazem) 30mg
  one tablet x TDS

Treatment of Myocardial Infarction

- Morphine 2-4mg

  i/v slowly
- Injection Strepto kinase 25,000 units i-v stat

  followed by 100,000 units in 1-3 hours
- Injection Lidocaine 150-200mg

  by i/v infusion

HYPERLIPIDEMIA

- Hyperlipidemia is an elevation of lipids (fat) in the blood stream.
- According to World Health Organization (WHO)

Most of the lipids in plasma are present as lipoproteins

- Chylomicrons.
- Very low density lipoproteins (VLDL).
- Low density lipoproteins (LDL).
- High density lipoproteins (HDL).

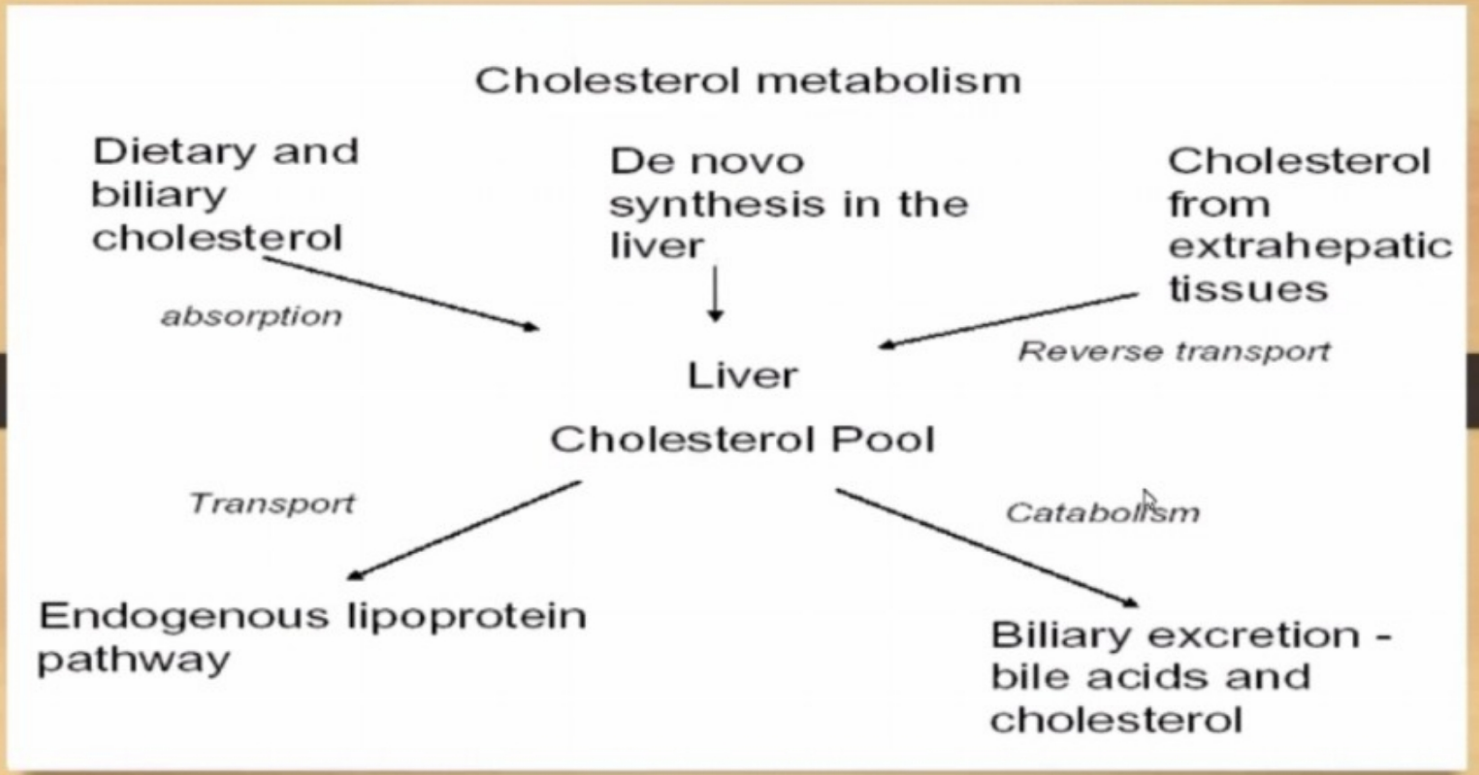
Other risk Risk Factors

Uncontrollable

- Sex
- Hereditary
- Race
- Age

Controllable

- High blood pressure
- High blood cholesterol
- Smoking
- Physical activity
- Obesity
- Diabetes
- Stress


Cholesterol metabolism
Dietary and biliary cholesterol
De novo synthesis in the liver
Cholesterol from extrahepatic tissues
absorption
Reverse transport
Liver
Cholesterol Pool
Transport
Catabolism
Endogenous lipoprotein pathway
Biliary excretion - bile acids and cholesterol

Targets for Treatment of Hyperlipidemia

ATP III Classification of LDL, Total, and HDL Cholesterol (JAMA- May 16, 2001)

LDL CHOLESTEROL (Primary target for therapy) (mg/dL)	
< 100	OPTIMAL
100 - 129	NEAR OR ABOVE OPTIMAL
130 - 159	BORDERLINE HIGH
160 - 189	HIGH
>/= 190	VERY HIGH

Targets for Treatment of Hyperlipidemia

TOTAL CHOLESTEROL (mg/dL)	
< 200	DESIRABLE
200 - 239	BORDERLINE HIGH
>/= 240	HIGH

How will you treat patients with hyperlipidemia

- Dietary Restrictions.
- Exercise
- Lifestyle modifications e.g. smoking cessation, weight reduction
- Glucose control
- Lipid modifying pharmacological therapy

R_x of Hyperlipidemia (Hypolipidemic drugs)

Drug classification

1. HMG-CoA reductase inhibitors (statins)- Lovastatin, Simvastatin ,Pravastatin
2. Bile acid sequestrants (Resins) – Cholestyranine
3. Ezetimibe
4. Niacin
5. Fibrates (gemifibrozil)

Drug Treatment of Hyperlipidemia

- Tab Nicotinic acid 50mg

  1 tab 3 times daily with food, gradually increased to 1 tablets 4-6 times daily

OR

- Tab mevacor (Lovastatin) 20mg

  1 tab daily in evening, gradually increased to 4 tablets daily.

OR

- Cap Gempid (gemfibrozil) 600mg

  1 cap twice daily