

Cardiovascular System Disorder

Unit - 2

(a) Cardiovascular System

disorders -

Unit - 2 (Sec-A)

• Blood out force long-term
des artery (artery) cm^2
against it unit $\frac{\text{cm}^2}{\text{min}^2}$
severe complications cause
 cm^2/min^2
heart disease cm^2 related

Pharmacotherapeutics || D Pharm 2nd Year

Unit - 2

(a) Cardiovascular System disorders -

* Hypertension

(उच्च रक्तचाप)

* Definition →

- High blood Pressure or Hypertension is a chronic condition in which the heart is forced to pump blood against a high resistance.

Blood or force long-term

des artery (सहिपु) or

against it with the u^2

severe complications cause

heart $\frac{1}{2}$

- u^2 heart disease $\frac{1}{2}$ related

एडर $\frac{1}{2}$

* Classification →

- * Blood Pressure
 - * Systolic
 - * Diastolic

- Normal Less than 120 Less than 80

- Pre Hypertension 120 - 139 Less than 80

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- Stage-1 BP 130-139 ~~130-139~~
- Stage-2 BP 140 or more 90 or more
- Hypertensive crisis
Higher than 180 Higher than 120
- * Etiology (കാര്യ) →
 - Stress (സ്ത്രസ്)
 - Alcohol (അലിക്യ)
 - obesity. (മിഥിമ)
 - Medications (വെടിമ)
 - Genetic factors
 - Age (ഔ)

- salt intake (ചിന്യ വിരി)
- Dietary style
- Environmental factors.
- * Pathogenesis → (രീതിമ)
- ① Sympathetic nervous system activities →
 - sympathetic nervous system
 - α over activation α α
 - β adrenaline β secretion
 - increase β β β

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When heart rate or urine is
and cardiac output increase
it will be of Hypertension
and leads to heart failure

② Overproduction of sodium-retaining

hormones and vasoconstrictors.

③ Sodium and long time use of

④ obesity (obesity)

etc....

* Clinical Manifestations →
(clinical)

→ Severe headache. (dhat khat)

→ chest pain. (dhat n dhat)

→ Blurred vision. (dhat dhat)

→ confusion.

→ Dizziness. (dhat dhat)

→ Irregular heartbeat.

→ seizures. (dhat)

→ feeling hot (dhat dhat)

etc....

* Non-Pharmacological Management
→
(dhat dhat)

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① Dietary changes →

- High BP and Problems and

easily diet h changes and

for diet ut kanti h

- Health diet h

- salt and and

etc.....

② Exercise, (and and)

③ stress and manage and

④ smoking and and

⑤ Alcohol and and

* Pharmacological Management →

(treatment (and))

- Various medications use

and and h

1) Diuretics → • furosemide, Indapamide

2) α-Blockers → • Prazosin etc...

3) β-Blockers → • Labetolol etc...

4) calcium channel blockers →

- Amlodipin
- Nifedipin

- Verapamil etc.....

etc.....

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* Angina Pectoris -

* Definition →

• Angina ras taran t purkar

usa chest pain n lekar

purkar untr t un heart.

muscles n Blood flow reduce

ein n ein t/

• un coronary artery disease

ant ras symptoms ein t/

* Types of Angina →

• un three types ant ein t -

1) stable / chronic angina

2) Unstable Angina.

3) Variant Angina

* Etiology → (ant)

• coronary artery spasm (ant)

• Cocaine ant use ant/

• Atherosclerosis.

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- Maximum exercise. ❌
- Injury to coronary artery.
- Hypertension ❌

etc.....

* Pathogenesis → (रिजल्ट)

- Angina or pain following factors ❌ caused ❌

Predisposing factors.

चेअर के अदर एअर अ एअर



obstruction in coronary artery
(अंकिरीए अअर अ अअर)



Ishemia (अकअर)



Hypoxia

(अअरअर अर अर)



Reduced oxygen demand (Angina)

(अअरअर अर अर अर)



Thrombolysis → Unstable Angina.

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* Clinical Manifestations →

- Heart or pressure fail
हृदय रू/
- Burning sensation हृदय रू/
- Shoulders, back, Jaws and
arms में pain हृदय रू/

* Non-Pharmacological Management →

- weight control करना चाहिए/
- Smoking छोड़ना चाहिए/

- Heavy metals से avoid करना चाहिए/

- stress को ध्यान/

- Regular check-up of cholesterol level.

* Pharmacological Management →

following medication का use

करना चाहिए -

① β-blockers →

- Propranolol
- Atenolol

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• Metoprolol

etc.....

2) Nitratas →

• Nitroglycerine etc.....

3) calcium channel blockers →

• Verapamil • Amlodipine

• Diltiazem etc.....

4) others -

• Nicotandil.

• Dipyridamol

etc.....

Complet

Thank you 😊

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* Myocardial Infarction

(MI, Heart Attack) -
दिल का दौरा

* Definition →

Myocardial Infarction or Acute

myocardial Infarction (AMI) or

Heart Attack is a condition

in which blood supply to certain

part of heart is cut Heart of tissues

of death if not treated

* Types of MI →

1) Type-1

2) Type-2

3) Type-3

4) Type-4

5) Type-5

* Etiology → (कारण)

• Atherosclerosis (एथरोस्क्लेरोसिस)

• Cocaine poisoning

• Hypoxia (हैपॉक्सिया)

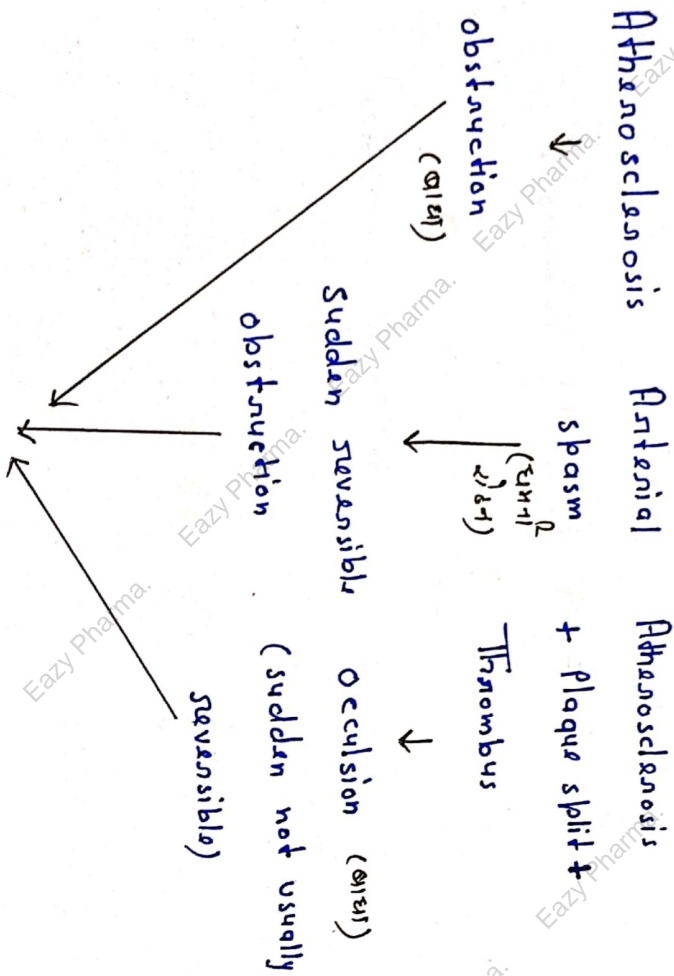
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- Epha drine poisoning etc/
- coronary artery vasospasm.

etc.....

* Pathogenesis (ಕಾರಣ) →



ambly

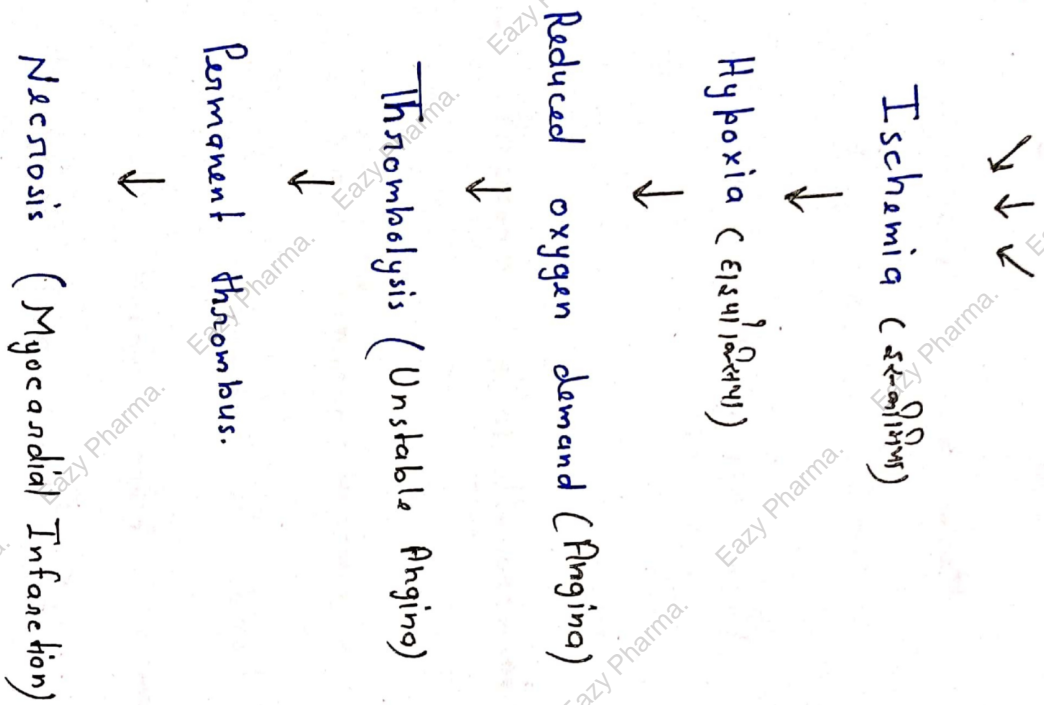
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* Clinical Manifestations →

- chest pain (କ୍ଷୀଣ-ନିଃସ୍ୱରା)
- fatigue (ଅସମର୍ଥତା)
- sweating (ସ୍ୱେଦନ)
- Anxiety (ନିଃସ୍ୱାସ)
- Nausea (ନିଃସ୍ୱାସ)
- Vomiting (ସର୍ଦି)
- shortness of breath (ଶ୍ୱାସକ୍ଷୀଣତା)
- weakness. (ଅସମର୍ଥତା)

- * Non-Pharmacological Management →
- life style change ଅନୁସରଣ

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- Smoking ↑ ↑ ↑
 - Alcohol avoid ↓ ↓ ↓
 - Loss body weight.
 - exercise increase ↓ ↓ ↓
etc.....
- * Pharmacological Management →
- Blood Thinners (Aspirin) →
↓ ↓ arteries ↓ ↓ blood clots
↓ ↓ break ↓ ↓ Normal
blood flow ↓ ↓ ↓
 - Thrombolytics →
- ↓ ↓ blood clots - ↓ ↓ dissolve
↓ ↓ ↓
 - Antiplatelet drug →
• New blood clots ↓ ↓
formation ↓ ↓ prevent ↓ ↓ ↓
- ACE inhibitors →
• captopril
• Lisinopril
• Ramipril
etc.....

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* Hypertlipidemia -

* Definition →

- Hyperlipidemia is a blood condition characterized by high levels of fat (lipids) in the blood, especially cholesterol and triglycerides. An increase in abnormal serum lipids is called hyperlipidemia.
- It is commonly caused by poor lifestyle habits.

• poor diet.

• Insufficient Physical activity)

etc.....

* Etiology → (causes)

- Many factors cause many seasons of -

 - 1) Smoking.
 - 2) Excessive Alcohol drink.
 - 3) Fatty acid diet.
 - 4) Obesity (obesity)

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5) Being stressed

* some drugs cause -

- 1) β -blockers.
- 2) Diuretics.
- 3) Hormonal control pills.
- 4) steroids.

etc....

* Pathogenesis (कारण) →

- Digestion की help करे के लिए
- Given Hormone के लिए - कीय

cholesterol में थोड़ा है

• Diet में High fatty food

intake करे के body में

cholesterol का level increase

के under है Hyperlipi-

demia का कारण है

Type of cholesterol	Normal range.
1) Total cholesterol - mol.	< 200 mg/dl
2) Bad (LDL) cholesterol.	< 100 mg/dl.
3) Good (HDL) cholesterol.	At least 60 mg/dl
4) Triglycerides	< 150 mg/dl.

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* clinical Manifestations →

- 1) weight gain (dilemi)
- 2) Depression. (trastid)
- 3) Fatigue. (trastid)
- 4) loose stools (udd qdd)
- 5) Bumps
etc.....

* Non-Pharmacological Management →

- life style change. oncaj
- exercise oncaj /
- avoid smoking

• weight loss oncaj

• healthy food.

etc.....

* Pharmacological Management →

* Drug therapy -

• HMG - CoA Reductase inhibitors
(statins)

• Bile acid-binding Resins

eg - cholestyramine, cholestipol

• Niacin (Nicotic acid)

• fibric acid derivatives

oo gemfibrozil.

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Congestive Heart failure (CHF)

* Definition →

• congestive heart failure is a clinical condition

Heart sufficient amount of

blood can pump out

• Body requirement of oxygen

and

* Types of CHF →

- 1) Left-sided Heart failure
- 2) Right sided heart failure.
- 3) systolic heart failure.
- 4) Diastolic heart failure.

* Etiology (causes) →

CHF following reason are

cause are -

- 1) coronary artery disease
- 2) Hypertension
- 3) Heart muscles disease

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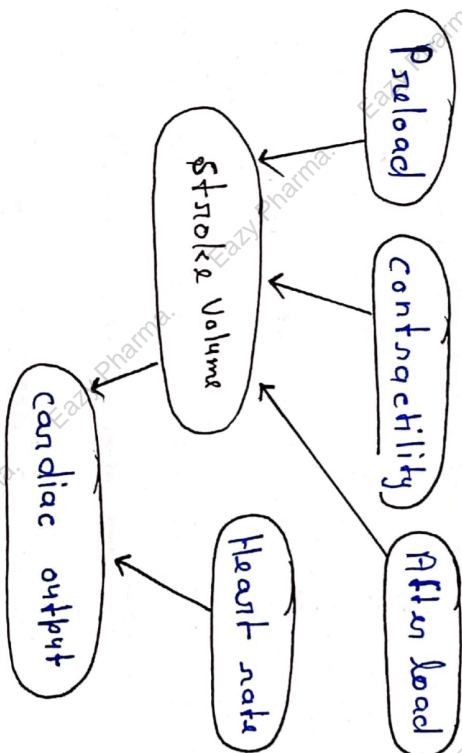
- 4) High blood pressure
- 5) Severe lung disease
- 6) Diabetes
- 7) Severe anaemia.
- 8) Abnormal heart rhythms.

* Pathogenesis (रूपरेखा) →

- Heart failure arises due to various factors such as coronary artery disease, chronic lung disease or diabetes

suffering or risk of heart failure

- CHF is a life-threatening condition where the heart cannot pump enough blood to meet the body's oxygen requirements.



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* Stages of CHF →

• stages of CHF -

1) stage - A.

2) stage - B.

3) stage - C.

4) stage - D.

* Clinical Manifestations →

• Edema problems

• Dry cough.

• Nausea. (உயிர்)

• Irregular heartbeat.

• weight gain (புர எடைய)

• Ankles, leg and abdomen

of swelling

etc.....

* Non-Pharmacological Management →

• Avoid Alcohol (புகை விட)

• Avoid Smoking (புகை விட)

• Regular exercise. (உயிர்)

• Vaccination (புகை)

• Physical rest (புகை)

• Proben oxygen

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* Pharmacological Management →

① ACE inhibitors →

eg - Enalapril - etc

② β-blockers →

eg - • Metoprolol
• Bisoprolol.
etc...

③ Diuretics →

eg → furosemide.
→ Torsemide.
etc...

④ Inotropic drugs →

• cardiac glycosides →

• Digoxin, digitoxin etc...

• sympathomimetics →

• Dopamine
etc...

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THANK YOU.

By Dr Firoz khan

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