Toppersnotes
Unleash the topper in you

ESIC

NURSING OFFICER

EMPLOYEES' STATE INSURANCE CORPORATION

Volume – 6 (PART – 3)

MEDICAL SURGICAL NURSING
(HUMAN BODY SYSTEM & DISORDERS)

SIERRA INNOVATIONS

CONTENT

"HYPERTENSION"

Def:→ When there persistent elevation of B.P more than 140/90 MM Hg known as Hypertension

Classification

(1) **Primary Hypertension**

⇓

also K/as ⇒ Idiopathic / Essential Hypertension

⇓ ⇓

due to some unknown cause

above 60 year in person elastic ~~का~~ होने से ~~कारण~~ Atherosclerosis

(2) **Secondary Hypertension**

⇓

Due to some known Cause

⇓

Etiology ⇒ (A) C.V. Disorder ⇒ CAD
(B) Renal disorder
(C) Endocrine Disorder ⇒ Diabetes Mallitus

⇓

Hypo / Hyperthyroidism

⇓ ⇓

BMR ↑se

⇓

BP ↑se

(D) Drugs ⇒ oral Contraceptive pills
Anti-depressent drug
Steroid
NSAID

⇒ due to prolonged, persistend used

(3) Pre-Hypertension B.P. = 120-139 / 80-89

(4) Systolic Hypertension When ↑se only systolic B.P. more than 140 MMHg

(5) Diastolic Hypertension When ↑se only diastolic BP more than 90 MMHg

(6) Benign Hypertension ⇒ B.P. ⇒ 180/100

Maximum ⇒ 200/100 MM of Hg

(7) Malignent Hypertension ⇒

⇒ It is medical emergency condition.

⇒ when the B.P. of a person exceed more than 200/100 mm of Hg

⇒ It should treat immediately by the use of emergensive Hypertensive drug

Eg →
Laxis
Nitroglycerin
Hydralazine
Sodium Nitroprusside

⇒ During the malignant Hypertension
⇓
Risk ⇒ Damage the vital organ of the body

⇒ Malignant Hypertension also known as "Hypertensive Crisis"

* Risk factor of HTN ⇒ same as CAD

* P/P ⇒

B.P. ⇒ Cardiac output x peripheral Resistent

⇒ Cardiac output ↑se ⇒ Systolic B.P. ↑se
⇒ peripheral Resistence ↑se ⇒ diastolic B.P ↑se

* C/M ⇒

(1) In Hypertension the pt. may be asymptomatic for prolonged time

(2) The some symptom which are present by pt are :→

* Occipital Headache
* vertigo
* Tachycardia
* palpitation
* Chest pain
* Dyspnea
* Epistaxsis
* Sweating

⇒ The target organ HTN

(1) Heart ⇒ CAD (MI, Angina pectoris)
(2) Brain ⇒ stroke
(3) Kidney ⇒ CRF [due to damage Nephrone]

⇒ Diagnostic Measures

(1) History collection and physical Examination
(2) ECG
(3) Lipid profile ⇒ (cholestrole level ↑se)
(4) Serum Electrolyte (Na ↑se)
(5) Blood Sugar, CBC.
(6) RFT / LFT, USG
(7) ECHO Cardiography
(8) Thyroid profile

⇒ Mgt

(1) Life style Modification
(2) Dietary Modification
(3) Pharmacology

Rx ⇒ (1) Tab → Atenlol
OR
Tab → Amlodipine
OR
Tab → Laxis

(2) Tab → Atorvastine / statin / Levastatin
↓
Anticholesterol drugs

Amlovas AT ⇒ Amlodipine + Atenolol
Alpraxo → 0.5 Mg
⇓
Anti-anxiety, Sedative, Muscle Relaxant
⇓
vasodilation (Use B.P.)

(Pain)
⇑
* "ANGINA PECTORIS" *
⇓
Angina pectoris is refered to chest pain due to ischemia of Heart Muscle (Myocardium)

Etiology

The Most Common ~~Cause~~ (Cause) Angina pectoris
⇓
Atherosclerosis

Risk factor ⇒ Same as CAD

P/P ⇒

O_2 demand of Myocardium → O_2 supply to Myocardium

Imbalance

O_2 supply ~~decrease~~ ↓se
O_2 demand ↑se

⇓
Ischemia to Myocardium

↓↓↓

An Aerobic Respiration of some myocardial Fiber

↓↓↓

Formation of Lactic Acid

↓↓↓

Pain ⇒ Manage

↓↓↓

O_2 ↑se supply
O_2 ↓se demand

* Pattern / Classification / Type of angina pectrois

(1) Stable angina ⇒

↓↓↓

also K/as ⇒ Excertional angina

↓↓↓

⇒ There is a predictable pattern of angina
⇒ pt. compalined of ischemic chest pain

↓↓↓

during exercise or exertion or during cold environment, after meal and during stress

⇒ The chest pain has been relived by Rest or nitroglycerine.

(2) Unstable Angina ⇒

↓↓↓

also K/as → pre-infraction angina

⇒ There is a no predictable pattern of ischemic chest pain. The chest pain may occur at rest & may or may not be relived by Rest or nitroglycerin

(3) Variant Angina ⇒ There is variable pattern of
⇒ Chest pain
⇒ The pain occur
↓↓
Due to the coronary artery spasm

(4) Silent Angina ⇒ This type of angina the pt. does not present any clinical presentation clinical symptom of angina pectoris ~~but the~~
↓↓
But The ECG show pattern of ischemia

(5) Micro Angina
↓↓
also-k/as → Refractory Angina
↓↓
⇒ It is the Chronic pattern of ischemic pain which does not respond ~~to~~ medical intervention
↓↓
Ischemic pain ⇒ due to micro-circulation in formation of clot.

C/M ⇒
Tachycardia
Chest pain
Palpitation
Sweating
Dyspnea
A → Anorexia
N → Nausea
V → Vomiting
F → Fatigue

Diagnostic Measures
III

(1) History or physical Examination
Main
(2) ECG
(3) TMT
(4) Angiography [Coronary angiography]
(5) Blood Sugar,
(6) Lipid profile
(7) Electrolyte (Serum), CBC
(8) ECHO Cardiography

Mgt ⇒
① Life Style Modification
② Dietary Modification
③ Treatement ⇒ Rest
Tab NTG SOS
Tab. Amlodipine AC
OR
Tab. Atenolol AC

Tab. Atorvastin 10mg (1pc)

(4) Invasive procedure / Surgical

⇓

* PTCA
* Atherectomy
* Stent
* CABG

(5) In Case of unstable anging ∴ 3 tab. NTG

⇓

Emergency care ⇒ *O2 Administeration
*Obtain ECG

⇓

Q wave abnorman than
*give/Administer Streptokinase, urokinase

* MYOCARDIAL INFRACTION *

Q Which is the most common cause of MI
(A) Coronary artery Embolism
(B) Coronary Artery Spasm
(C) Coronary artery thrombus
(D) Severe Anaemia (C)

Q Which the priority of N.g action perform by the nurse in emergency department ∴ the pt of MI

MI pain → More than 15 Min

Blood ⇒ troponine level ↑se ⇒ confirm indicate MI"

(A) Administer Aspirin
(B) O_2 inhalation
(C) Administer Streptokinase (B)
(D) Administer β-Blocker

Q3. which is the most important and specific Cardiac marker for myo-cardial damage
(A) Myoglobin
(B) Troponine
(C) CK-MB
(D) Lactate dehydroginase (LDH) (B)

Q4. which is the most common complication of MI
(A) Cardiogenic shock
(B) Heart failure
(C) dysrhythmia
(D) Recurrent MI (C)

Def. of MI

It is the infraction to the myocardium

Due to Complete blockage of Coronary artery

⇒ It is Life threatening condition which require immediate intervention

⇒ MI also K/as ⇒ Heart Attack / Coronary Occlusion
(Acute condition)

⇒ It also include under "Acute coronary syndrome (ACS)"
↓
ACS include ⇒ unstable angina, MI

⇒ Most common site of MI are ⇒ Anterior wall of Lt ventricle.

⇒ There are 2 type of presentation of "MI"
↓
(i) Non-ST-Segement elevation MI (NSTEMI)
↓
Commonly present in female
↓
⇒ Common cause of NSTEMI is
↓
platelet aggregation
↓
Rx ⇒ Aspirin OR Heparin

(ii) ST-Segement elevation MI
↓
Common cause ⇒ Thrombus
↓
Treated by ⇒ Streptokinase

Etiology of MI ⇒
① Coronary artery thrombus
↓

The factors precipitated the thrombus formation are :→

(A) Atherosclerosis in Coronary arte
(B) Rupture of Atheroma
(C) Injury to the inner wall of Coronary artery
(D) Coronary artery Inflammation

(2) Coronary artery Embolism

(3) Coronary artery Spasm

(4) Severe anemia

(5) Hypoxia → (due to Hge)

* Risk Factor of MI ⇉ same as CAD

* C/M ⇉

① Effect on CVS ⇉

Ⓐ Chest pain

↓↓

* It persist more than 15 min
* Can not be relived by NTG or Rest
* Require Morphine Sulphate
* There is numbness to the Lt shoulder

(B) Hypertension or Hypotension
(C) Tachycardia or Bradycardia
(D) palpitation may be present

② Effect on Respiratory
* Dyspnea, Tachypnea
* Coughing, wheezing

③ Effect on Renal ⇒ * oliguria

④ Effect on Digestive ⇒ * Anorexia
* N/V
* fatigue
* Constipation

⑤ Effect on Nervous and psychological
⇓
* Altered LOC
* Anxiety, fear
* Fear

(6) Effect on skin ⇒
* Cool & diphoretic Skin

* Diagnostic Measure
⇓
(1) History OR Physical Examination
main
(2) ECG ⇒ Abnormal Q wave
(3) Coronary Angio-graphy
(4) ECHO-Cardiography

(5) Blood Sugar
(6) Lipid profile
(7) X-Ray
(8) Serum Electrolyte
(9) LFT, RFT
IMP (10) Cardiac Marker ⇒ / Cardiac Enzyme

(1) Troponine ⇒ Troponine is a protein found in Heart Muscle (Prolonged time)

Tropinne has 3 Iso-mark

- Cardiac Troponine I — CTnI
- Cardiac Troponine C — CTnC
- Cardiac tropine T — CTnT

✓ CTnI and CTnT Most Specific and Most sensitive Marker

Their level Has ↑se for 4-6 Hours after MI

⇒ Reaches to peak → 24 Hours and remain in blood for about → 7-14 days

(2) Ck-MB / CPK-MB ⇒ II nd important Marker for Myocardial damage (Myocardial Band)

Creatinine kinase Creatinine phospho-kinase

Ck-MB ⇒ Heart Muscle
Ck-MM ⇒ Skeletal
CK-BB ⇒ Brain

(3) Myoglobin ⇒ It is the oxygen binding protein present in Heart Muscle.

* The Level of Myoglobin ⇒ ↑se quickly just after 2-3 Hour of Myocardial damage.
⇒ decline quickly when the blood supply of myocardium has restored.

⇒ This Cardiac Marker has also used to know the effectiveness of thrombolytic therapy

(4) Lactatic Dehydrogense ⇒ It is a enzyme responsible for conversion of Lactic acid into pyuvik acid

⇒ It has 2 Isomer :→
(1) LDH_1
(2) LDH_2

$LDH_1 < LDH_2$

In Normal person ⇒ $\frac{LDH_1}{LDH_2} < 1$

In pt. of MI ⇒ $\frac{LDH_1}{LDH_2} > 1$