

✓ Coronary Cardiac/Heart Failure CCHF/CHF

Date _____

Heart failure can occur if the heart can't pump or fill adequately

★ Pathophysiology

Renin-Angiotensin System

Renin + Angiotensinogen



Angiotensin I



Angiotensin II

Peripheral
Vasoconstriction



↑ After load



↓ Cardiac output

Aldosterone secretion



Salt and water retention → Edema



↑ Plasma Volume



↑ Preload



↑ Cardiac workload



Heart failure



A Classification

1. Diuretics

- Loop diuretics - - Furosemide
- Thiazide diuretics - Hydrochlorothiazides
- Spironolactone - Potassium sparing diuretic, aldosterone antagonist

2. Angiotensin Converting Enzyme inhibitors

- Enalapril
- Captopril

3. Angiotensin Receptor blockers

- Losartan
- Valsartan

4. Beta-Blockers

- Bisoprolol
- Metoprolol
- Carvedilol

5. Vasodilators

- Hydralazine
- Isosorbide dinitrate

6. Inotropic drugs

(i) Cardiac glycosides - Digoxin

(ii) β -agonist - Dobutamine

(iii) Phosphodiesterases Inhibitors - milrinone