

Assignment on ECG Interpretation

ECG Sinus Tachycardia

P-Wave: Normal.

PR Interval: $0.12 - 0.20$.

QRS: < 0.12 .

Rate: > 100 .

Regularity: Regular.

* Key point / causes

- Caffeine.
- Exercise.
- Fever.
- Anxiety.
- Drugs.
- Pain
- Hypotension.
- Volume depletion.

* Interventions.

- Fix the cause!!

ECG Sinus Bradycardia:

P-Wave: Normal

PR Interval: $0.12 - 0.20$

QRS: < 0.12

Rate: < 60

Regularity: Regular

* causes.

- Sleep
- Inactivity
- Very athletic
- Drugs
- MI

* Interventions.

- Fix the cause
- Atropine

Heart Blocks:

First degree heart block: If P is far from R than you have 1st degree heart block. মানে P থেকে R এর দূরত্ব 5 বক্স বেশি। অলেকটা ডানসাইড এর স্ত।

P-Wave: Normal

PR Interval : > 20

QRS : < 0.12

Rate : 60-100

Regularity : Regular.

* Causes:

- Often and incidental finding.
- peds: infection.
- Myocarditis.
- Congenital heart disease.

* Intervention:

- Fix the cause
- Treatment is generally not required.
- If extreme - pacing.

Second degree heart block - Type-1: Longer, Longer Longer drop than you have WENCKEBACH. মানে ৫ বক্স ৫ large square পড়বে QRS complex, then 6 large square, then 7 large square. এটার ২য় P এর পরে QRS complex থাকবে না, এটার ২য় drop এর 2nd degree heart block Type-1.

P-Wave : Not a QRS for every P wave

PR Interval : Longer, longer, longer - drop

QRS : < 0.12

Rate : 60-100

Regularity : Regular.

* Causes.

- Ischemia
- Myocarditis
- Status post-cardiac surgery.

* Interventions.

- Fix the cause
- Asymptomatic: no treatment or required
- Symptomatic: Pacing.

2nd degree heart block Type II: If some P's don't go through, then you have a Mobitz II. মানে PR থাকবে নরমাল তবে QRS থাকবে। কিন্তু যেটা ব্লক হওয়া P থাকবে কিন্তু QRS থাকবে না।

P-Wave: Not a QRS for every P

PR Interval: 0.12 - 0.20

QRS : < 0.12

Rate : < 60

Regularity : Irregular.

* Causes.

- MI
- Ischemia

* Interventions.

- Fix the cause.
- Pacing.

Third degree heart block: If P's and Q's disagree then you have a third degree. মানে P-wave নরমাল থাকবে, কিন্তু QRS independently beat করবে, কোনো মানে কোনো মিল থাকবে না।

P-Wave: Normal
PR Interval: variable
QRS : < 0.12
Rate : < 60
Regularity : Irregular

Causes:

- Damage to the heart
- MI
- Heart valve disease
- Rheumatic fever
- Sarcoidosis

Interventions:

- Fix the cause
- Pacing.

Atrial Dysrhythmias

Atrial Flutter: মনে P-wave (sawtooth) থাকে
মনে বরাবর দাঁড়ের মত এবং QRS complex হবে নরমাল, *
তাহলে এটা Atrial flutter.

P-Wave: Saw-tooth
PR Interval: None
QRS : < 0.12

Atrial Rate: 250-400

Ventricular Rate: Varies

Regularity : Regular or Irregular.

* causes

- Heart disease.
- MI
- CHF
- Pericarditis

* Interventions:

- Fix the cause
- Cardioversion
- Pacing
- Antiarrhythmics: amiodarone
- Beta blockers: metoprolol
- Calcium channel blockers: diltiazem.

Atrial Fibrillation: P-wave গুলো হবে wavy এবং
পূর্বের চেয়ে দ্রুত, আর QRS complex বরাবর তাহলে
হবে Atrial Fibrillation.

P-Wave : Wavy

PR Interval : None

QRS : Q.12

Atrial Rate: > 400

Ventricular Rate: varies

Regularity : Irregular.

Causes:

- Heart disease.
- Pulmonary disease.
- Stress.
- Alcohol.
- Caffeine.

Ventricular Dysrhythmias

❏ Ventricular Tachycardia: QRS complex চমকে সরল
twin এর মত এবং wide ও bizarre, তখনে এটা V-tach

P-Wave: None

PR Interval: None

QRS: >0.11 Wide ও bizarre.

Rate: 150-250

Regularity: Regular.

* Causes

- MI
- Ischemia
- Digoxin toxicity
- Hypoxia
- Acidosis
- Hypokalemia
- Hypotension

* Interventions

- Fix the cause
- Yes pulse
- Cardioversion

No pulse

- CPR
- Defibrillate
- Epinephrine

❏ Ventricular Fibrillation: Wave এর মত এবং

QRS complex নাই। তখনে এটা ventricular fibrillation.

P-Wave: None

PR Interval: None

QRS: None

Rate: None

Regularity: Irregular.

* Interventions

- Fix the cause.
- Cardioversion.
- Antiarrhythmics: amiodarone.
- Beta blockers: metoprolol.
- Surgery: ablation.

Supraventricular Tachycardia (SVT): ≈ 175 Hz
Narrow QRS complex. Supraventricular tachycardia
নামের মধ্যে ventricle আছে কিন্তু Atrium এ Problem.

P-Wave: hidden

PR Interval : Immeasurable

QRS : < 0.12

Rate : 150-250

Regularity : Regular.

* Causes:

- Caffeine
- CHF
- Fatigue
- Hypoxia
- Altered pacemakers in the heart.

* Interventions:

- Fix the cause
- Cardioversion
- Adenosine.

* Causes

- MI
- Ischemia
- Hypoxia
- Acidosis
- Hypokalemia
- Hypotension
- Most common cause of sudden death.

* Interventions.

- -Fix the cause
- CPR
- Defibrillate
- Epinephrine.

Cardioversion vs defibrillation

Cardioversion	Defibrillation
→ Synchronized shock - in time with the client's own rhythm	→ Asynchronous - does not coordinate with the client's own rhythm.
→ Lower energy	→ Higher energy
→ Adults: 100 - 360 J	→ Adults: 200 - 360 J
→ Pediatrics: 2 J/kg	→ Pediatrics: 2 J/kg

❖ Asystole: Flat line ECG which shows no electrical activity.
Asystole.

P-Wave: None

PR Interval: None

QRS: None

Rate: None

Regularity: N/A

* Causes:

- Follows VT/VF in cardiac arrest
- Acidosis
- Hypoxia
- Hypokalemia
- Hypothermia
- Overdose

* Interventions:

- Fix the cause.
- CPR.
- Epinephrine.