



Arrhythmia :

- Also called dysrhythmia , is an irregular or abnormal heart beat .
- It could be normal finding
- It is not always dangerous
- It could be short lived
- It is best diagnosed by ECG

Types arrhythmias:

Atrial flutter



Rate: The heart rate in atrial flutter is usually fast. It may be normal or slow with drug therapy

P waves: classical *saw-tooth* appearance. atria fire at a rate of 200-350/minute

P-R: N/A

QRS: Usually narrow

Ratio: May be 2:1, 3:1, 4:1, or varv.

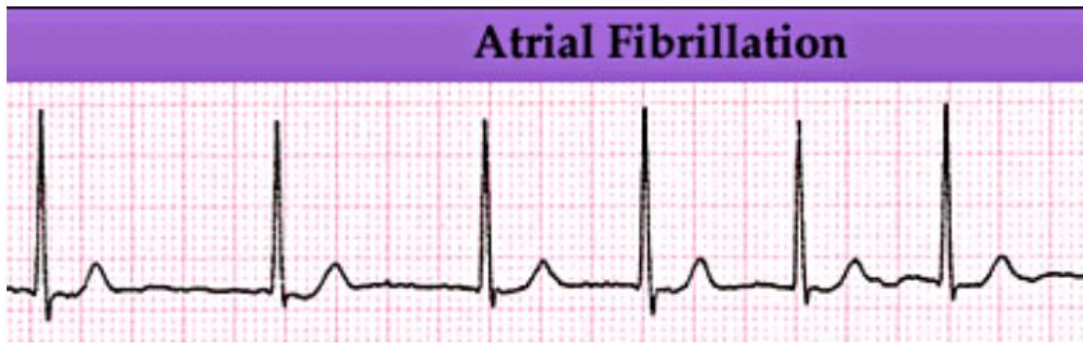
Rhythm: Usually regular

Atrial Fibrillation

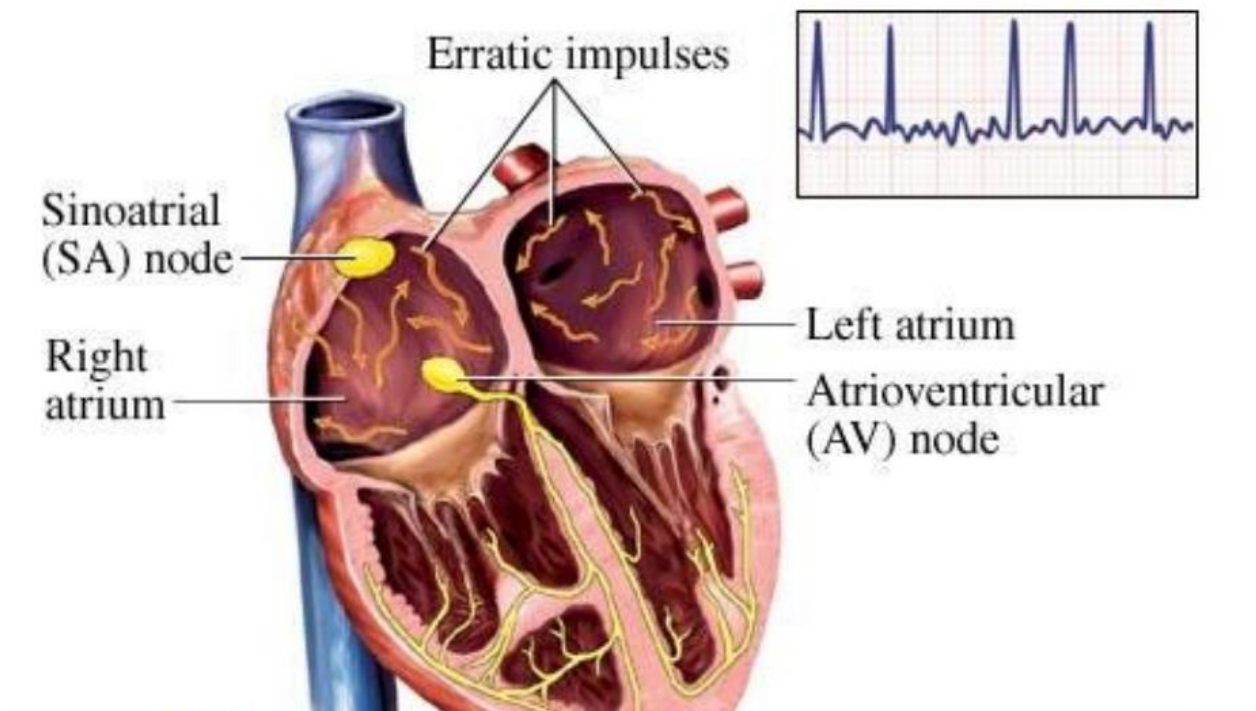
- This is a result of many sites within the atria firing electrical impulses in an irregular fashion causing irregular heart rhythm.



M.S.c : Hanna abdukkareem hussein

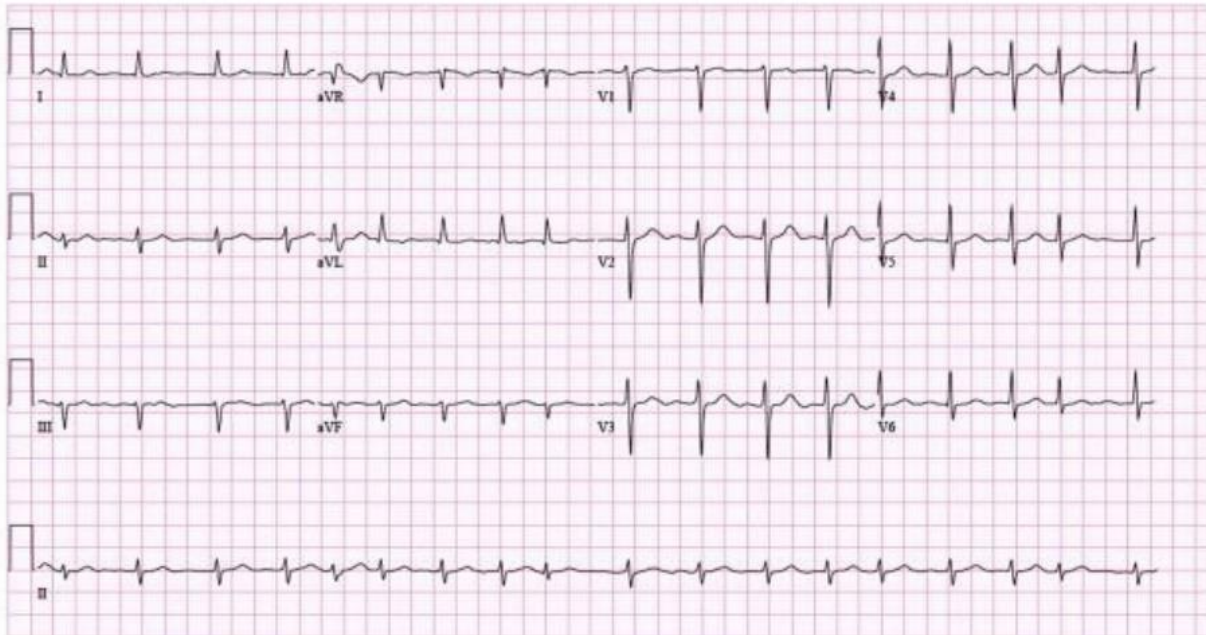


Notice the absence of P waves and the irregular rate.





M.S.c : Hanna abdukkareem hussein

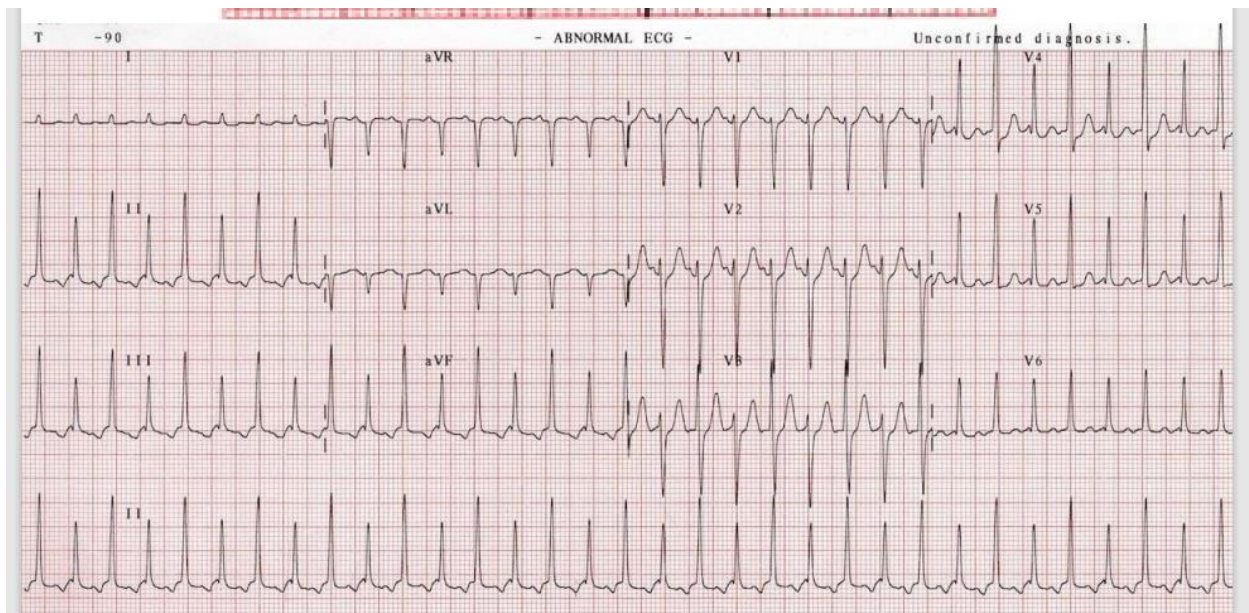


Paroxysmal Supraventricular Tachycardia(SVT)

- (PSVT) is a very common arrhythmia.
- Its onset is sudden,
- usually initiated by a premature supraventricular beat (atrial or junctional), and its termination is just as abrupt .
- The P waves are so buried in the QRS complexes that they cannot be identified or inverted and the QRS complex is usually narrow (normal) .



M.S.c : Hanna abdukkareem hussein



Premature Ventricular Complexes (PVC)

- The ventricles fire an early impulse which causes the heart to beat earlier causing irregularity in the heart rhythm

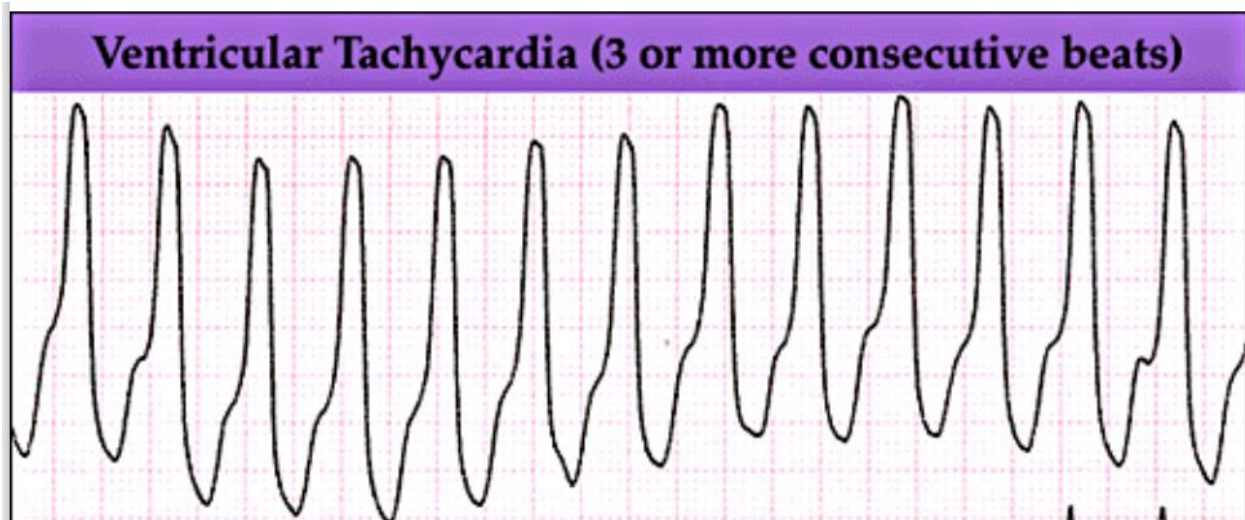


M.S.c : Hanna abdukkareem hussein



Ventricular Tachycardia

- Abnormal electrical impulses that start in the ventricles and cause an abnormally fast heartbeat. This often happens if the heart has a scar from a previous heart attack. Usually, the ventricle will contract more than 200 times a minute.



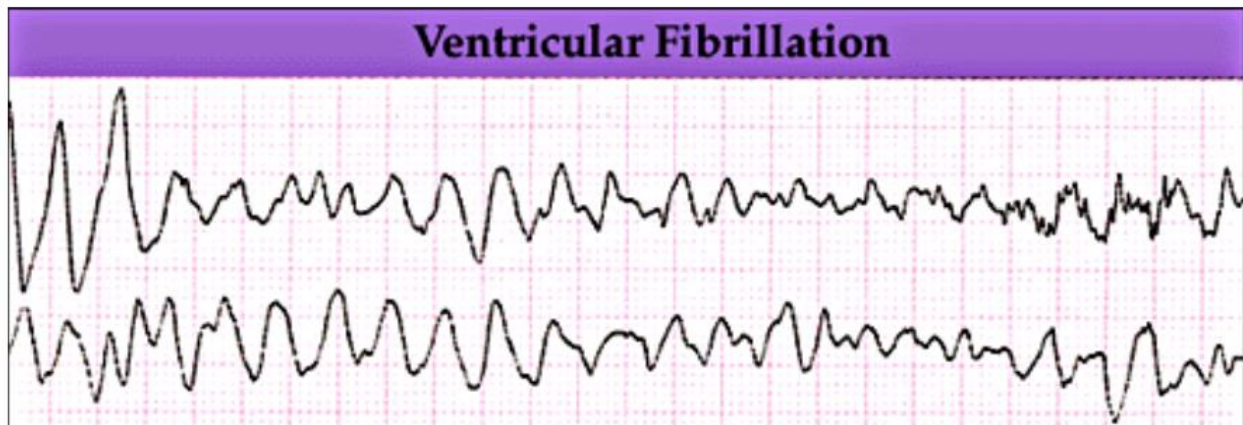
Note increased heart rate with regular rhythm and absence P wave with wide QRS complex



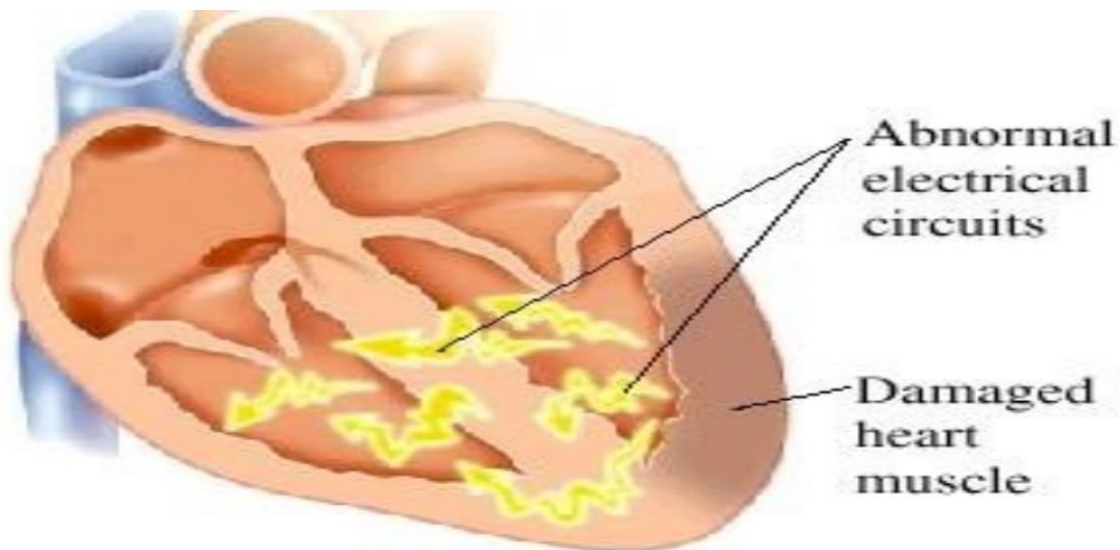
M.S.c : Hanna abdukkareem hussein

Ventricular Fibrillation

♣ An irregular heart rhythm consisting of very rapid, uncoordinated fluttering contractions of the ventricles. The ventricles do not pump blood properly, they simply quiver. Ventricular fibrillation is life threatening and usually associated with heart disease. It is often triggered by a heart attack.



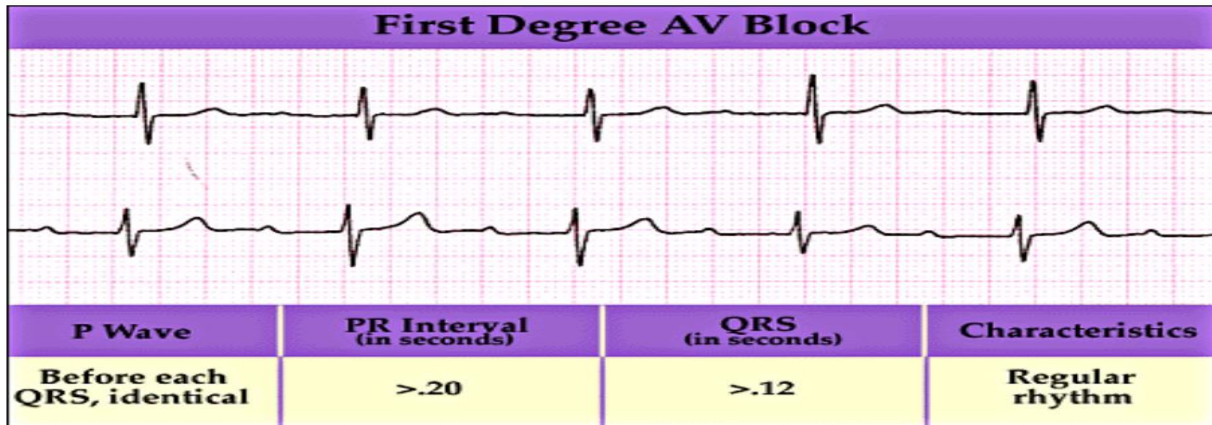
Notice that the first 2 beats of this EKG are Ventricular tachycardia





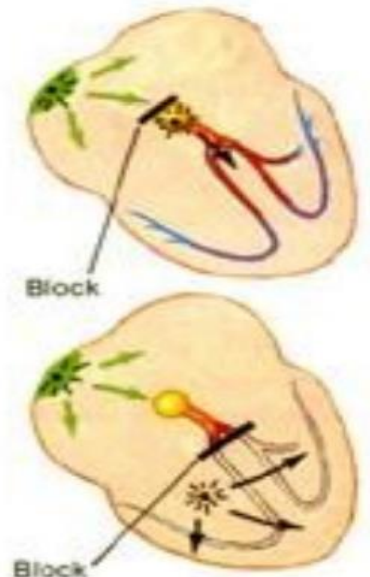
M.S.c : Hanna abdukkareem hussein

Heart block



Second degree AV block 16 Type I (Wenckebach): Increasing PR until nonconducted P wave occurs

3rd Degree or Complete AV Block



- Complete heart block is complete failure of conduction through the AV node • The atria and the ventricles are depolarizing independently of each other.



M.S.c : Hanna abdukkareem hussein

Arterial pulse

- ✓ Arterial pulse is one of the vital signs that must be checked with general examination
- ✓ The arterial pulse **is the rhythmic expansion of pressure waves along the walls of the arteries** which is produced during each systole of cardiac cycle
- ✓ The strength of the pulse is determined by pulse pressure. The pulse pressure is the difference between systolic & diastolic pressure .

Characteristics of pulse

1. **Rate**
2. **Rhythm**
3. **Volume**
4. **Character**
5. **The condition of vessel wall**

EXAMINATION OF PERIPHERAL ARTERIAL PULSE :



Radial artery pulse examination



Brachial artery pulse examination



Carotid artery pulse examination



M.S.c : Hanna abdukkareem hussein



Femoral artery pulse



Popliteal artery pulse



Posterior tibial artery pulse



Dorsalis pedis artery pulse

AUTOMATIC MEASUREMENT OF PULSE :

- Pulse oximeter is non-invasive devices used to measure a patient's blood-oxygen saturation level and pulse rate.
- It is usually attached to the tip of index finger or wrist and can be wired or wireless.
- It is used to monitor pulse in hospitals and various medical settings .



Pulse Oximeters

