

# 36. Ventricular Arrhythmias

## V-Tach

- May be monomorphic or polymorphic and nonsustained or sustained.
- Monomorphic VT from a single abnormal focus or reentrant, has regular, identical QRS
- Polymorphic VT from several foci or pathways and is thus irregular, with varying QRS
- Nonsustained VT lasts < 30 sec; sustained VT lasts ≥ 30 sec or hemodynamic collapse.

## Torsade de Pontes

- Means "Twisting of the points" Swinging polarity of QRS
- EAD-Due to EAD "early after depolarizations"
- Polymorphic VT mostly preceded by marked QT prolongation
  - 1) Electrolyte abnormalities: low Mg, K, Ca
  - 2) Drugs: Tricyclic, Antidepressants, Antiarrhythmics 1a, Sotalol, Amiodarone, Emycin...



## Types of Monomorphic V-Tach

- a. Scar-related reentry - post-MI, sarcoidosis Repaired Tetralogy of Fallot, Batista  
The Post MI Scar VTach occurs after a decade.
- b. Uncommon scar-related reentry - scleroderma, giant-cell myocarditis
- c. Brugada Syndrome (ST elevation in V1-V3) more common amongst young men in South East Asia.
- d. All the same??? Brugada syndrome (Inherited), ARVD Arrhythmogenic Right Ventricular Dysplasia, a congenital cardiomyopathy (Acquired), Uhl Anomaly (Childhood), RBV outflow tract (RVOT) tachycardia

## Ventricular Fibrillation (VF)

- a. Zigzagging baseline; heart is a useless pump
- b. New guidelines for use vasopressin, amiodarone

## Sudden Cardiac Death

- a. Most cases occur in patients after myocardial infarction in patients with CAD
- b. Blunt impact (including sports, violence injuries) Commotio Cordis
- c. Emotional Trauma: Earthquake may also trigger SCD
- d. Non-potassium sparing diuretics appear to increase risk

**β-Adrenergic blockers** very effective post-MI prophylaxis/preventive therapy

## Indications for AICD-Implantable Cardioverter Defibrillator Therapy

- a. Cardiac arrest due to VF or VTach, not due to transient or reversible causes
- b. Spontaneous sustained VTach
- c. Syncope of undetermined origin with clinically relevant VTach or VF on EPS
- d. Nonsustained VTach with coronary artery disease, LV dysfunction
- e. Nonsustained VTach with EPS inducible VF or sustained VTach not suppressed by drug