

Wide Complex Tachycardia - WCT

www.pediatricarrhythmia.com

Monomorphic VT

VT criteria (Brugada or aVR Algorithm), monomorphic pattern

Lidocaine 1 mg/kg i.v.
(followed by 20-50 µg/kg/min)

Or

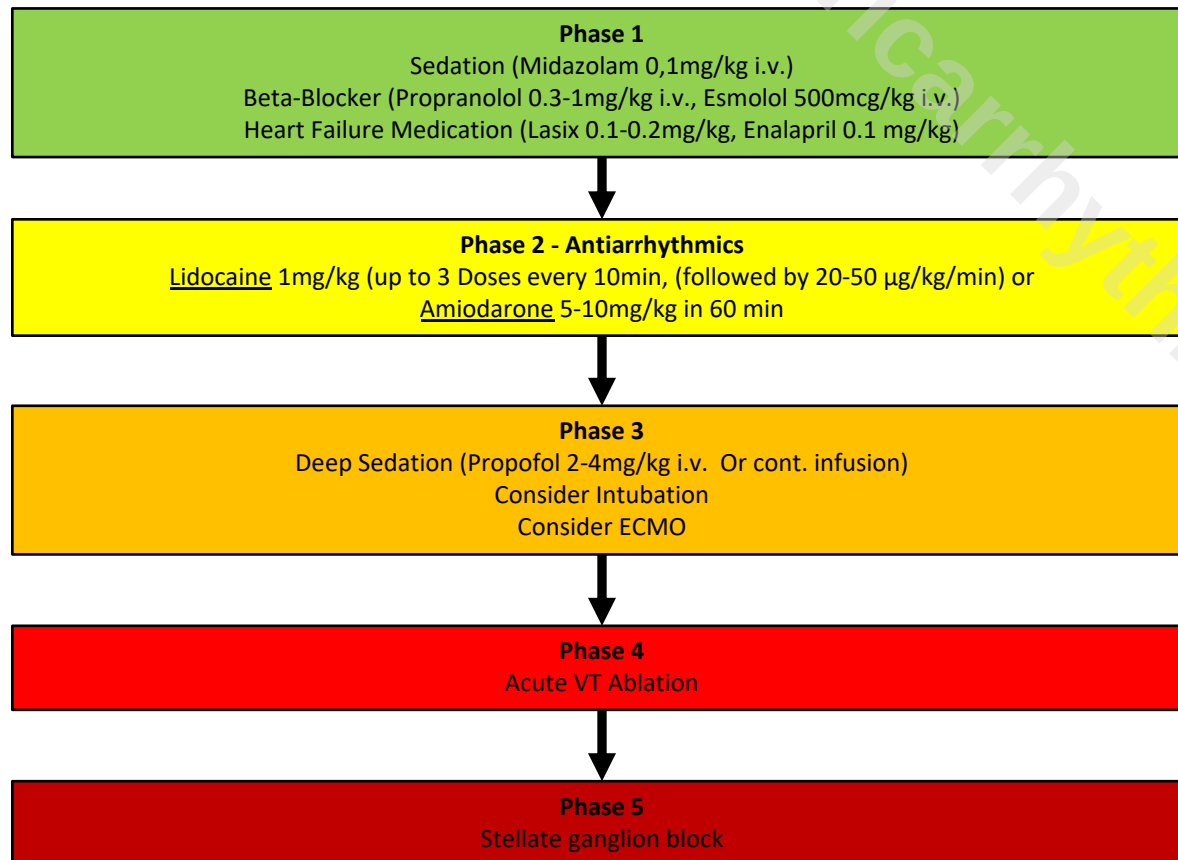
Sotalol (Sotalol) 0.5 – 2 mg/kg (Adult 25-120mg) i.v. in 10 min
(p.o. 1 – 4 mg/kg (Adult 50-160mg) 2-3 times daily)

Amiodarone 5 mg/kg i.v.
(in 20 – 60 min; max dose 300mg!!)

Cardioversion 1 J/kg
„synchronized“ !!

Polymorphe VT

VT criteria (e.g. Brugada or aVR Algorithmus), polymorphic pattern



Torsade de pointe

QRS alternans, known LQTS patient

Mg-Sulfate 25 - 50 mg/kg i.v.
(max dose 2000mg!)
E.g. Cormagnesin 0.1ml/kg (=40mg/kg) in 20-30 min

Lidocaine 1 mg/kg i.v.
(followed by 20-50 µg/kg/min)

Cardioversion 1 J/kg
„synchronized“ !!

or if pulseless
Defibrillation 4 J/kg

RVOT VT

LB BB + inferior QRS axis

**Adenosine 0.1 mg/kg i.v.
(push i.v. & flush with saline!!)**

Repeat: 0.2 mg/kg; 0.3 mg/kg

**Esmolol 500 µg/kg in 1 min. i.v.
then
50 – 300 µg/kg/min i.v.**

**Cardioversion 1 J/kg
“synchronized” !!**

Belhassen VT (postero-fascicular VT)

RBBB, QRS ≤ 140 ms, Left axis deviation, typical arrhythmia
in Tetralogy of Fallot

Verapamil 0.1mg/kg in 3min (max. 5mg!), then 5 μ g/kg/min

Amiodarone 5 mg/kg i.v.
(in 20 – 60 min; max dose 300mg!!)

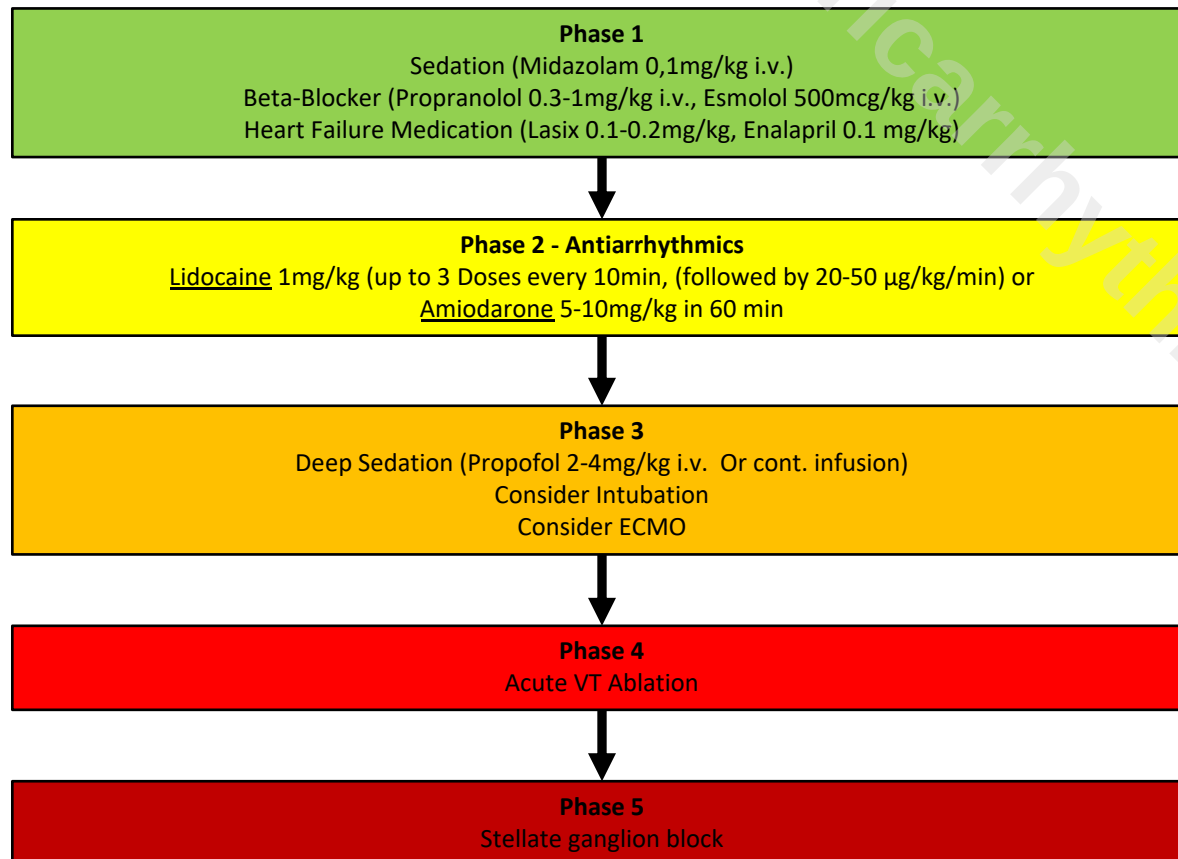
Cardioversion 1 J/kg
„synchronized“ !!

Remember: Tachykardia sensitive to Verapamil!!

CPVT

CPVT: Catecholaminergic Polymorphic Ventricular Tachycardia

bidir. Tachy (QRS alternans „beat to beat“ different morphology), Catecholamine associated (sports, agitation, ...)



**Cardioversion 1 J/kg
„synchronized“ !!**

Ventricular Arrhythmia in LQTS

QTc prolongation (>500ms worse prognosis!), possible Torsade/VT/VF

Mg-Sulfate 10% 0.4 ml/kg/h i.v.
or cont. 0.07 ml/kg/h

KCl 1mval/kg i.v. (keep serum-K high)

Discontinue QT prolonging medications (crediblemeds.com)

Isoproterenol 0.1 – 1 (2) µg/kg/min

Overdrive Pacing (10-20% faster than tachy cycle lengths)

Try: Lidocaine Bolus 1mg/kg i.v.

CAVEAT: NO AMIODARONE!!! (extreme QT prolongation! Vicious cycle!)

Long term therapy in VT

Propranolole 0.5 – 2 (-16) mg/kg/d in 4 ED p.o.

OR

Metoprolol 0.5 – 1 (-2) mg/kg/d in 2 ED p.o. (Start 0.1-0.2 mg/kg/d; retard in 1ED)

OR

Verapamil 3 (-9) mg/kg/d in 2-3 ED p.o. (Start 0.5-1 mg/kg/d; NOT <1 year of age!!)

Propafenone 6 – 12 (-15) mg/kg/d in 3 ED p.o.

OR

Flecainide 3 – 6 (-8) mg/kg/d in 3 ED p.o. (Start 1-3mg/kg/d)

Amiodarone 5 – 10 (-15) mg/kg/d in 2-4 ED p.o. (max. 1200mg/day)

Evaluate ablation therapy prior Amiodaron administration! Favored due to side effect profile of amiodarone.