Tachyarrhythmias – case management

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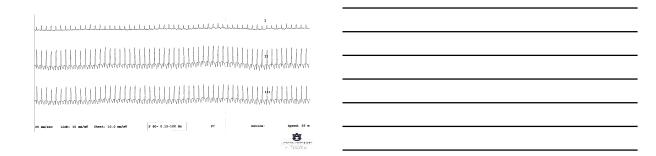


Case 1

- 6 yo MC Boxer
- CC: recent onset weakness and collapsing episodes

- appetite has been intermittently poor for 1 week
 collapsing episodes noted in last 2 days (signs consistent with syncope)
- - anxious, HR 300 bpm, RR 75 bpm, pulses poor





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then begin 0.5 mg/kg IV doses	begins to improve, then start PO) • 0.2 mg/kg IV – see what happens		
should see some effect with 3-4 doses	 then begin 0.5 mg/kg IV doses repeat in 5 min if no better 		

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Rate control

- Beta-blockers
 - prevents proper movement of Ca**
 major negative inotrope
 - - would make CHF worse or cause it to occur
 only if sure not in L-CHF
 - commonly used as PO (atenolol, carvedilol)
 - commonly used as PU (attention, carvetinion) propranoiol (non-selective B1 and B2)
 0.2 1 mg/kg IV q8h
 giv 0.2 mg/kg IV every 5-10 min until rate controlled cumulative dose is the q8h dose
 82 antagonism may cause bronchoconstriction unlikely clinically relevant





Rate control

• Digoxin

- parasympathetomimetic
 slows Ca** movement
 SIDE EFFECTS

 - pro-arrhythmic for ventricular arrhythmias
 AV block possible
 kidney failure
 0.0055 mg/kg IV Q1h until effect
 then start PO dose





Rate control

- Vagal maneuver
 - · best is ocular pressure

 - firm pressure over both eyes for 30 seconds
 most dogs are mildly uncomfortable
 effect may be seen after you release ocular pressure
 may be sudden



Rhythm control

- Procainamide
- Amiodarone
- Sotalol



Rhythm control

- Procainamide
 - Na+ channel blocker (class 1a)
 - works for SVTach and VTach

 - IV or PO
 nausea if given too fast IV
 - 15 mg/kg IV over 10 minutes

 - arrhythmia may resolve during injection finish injection
 then 7.5 mg/kg IV over 5 minutes if no response

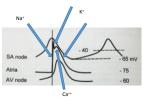




Rhythm control

- Amiodarone
 - K+ channel blocker (Class III)
 - broad spectrum works very well in SVTach or Vtach
 converts Afib to sinus

 - converts Afib to sinus
 hepatotoxicity main side effect
 typically after chronic use and reversible
 IV or PO (transition to PO Sotalol)
 IV with benzyl alcohol = anaphylactoid on
 IV as acqueous sol'n (Nexterone) = no problems
 S mg/kg IV q12h





Case 2

- 6 yo MC Boxer
- CC: one episode of collapse
- Hx:

 - 2 days of inappetance;
 1 episode of collapse with exercise down on ground for 5 seconds
- - anxious, HR 200 bpm, RR 32 bpm, rhythm irregular





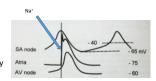
Questions to answer

- What is the rhythm diagnosis?
- at least know if supraventricular vs ventricular origin
- How concerned should I be?
 - i.e. treat now or not?



Lidocaine

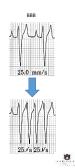
- Na+ channel blocker (class 1b)
- works only for VTach
- inhibits depolarization selectively in diseased tissue
- IV or PO (called mexiletine)
- 2 mg/kg IV
 - repeat in 5 min if no response





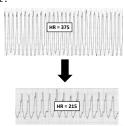
Procainamide

- Works well for Vtach
- I use it early, just in case I am wrong about Vtach • remember this works well for SVTach



What response do we want?

- Complete cessation of all VPCs
 doesn't often happen
- Vtach heart rate slows
- Vtach breaks, leaving VPCs



What now?		
We broke the Vtach If Lidocaine worked, then start a CRI 50 mcg/kg/min IV can increase to 75-100 mcg/kg/min (nausea and neuro signs start) If Procainamide worked, then continue 7.5 mg/kg q8h		
Start oral therapy Sotalol or Mexiletine	TAT.	
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Oral therapy		
Should take ~2-3 doses of oral meds to have an effect while these drugs are being started, parenteral therapy key once 2-3 doses on board, start to wean and D/C parenteral drugs I start with Sotalol BID dosing, rare side effect of lethargy (transient)		
Only use Mexiletine IF LIDOCAINE WORKED same class of drug (1b) TID dosing nausea/inappetance common side effect		
Continue with oral Amiodarone if Nexterone worked	AUBURN UNIVERSITY COLLIGE OF STEERISMAN HEDITARE	
Recheck		
Recheck Holter monitor in 2-4 weeks Minute ECG if not available Looking to prevent life-threatening rhythm not rying to make normal sinus Sustained Vtach, 50 – 100,000 VPCs in 24h, multiform, R-on-T		
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Taka hama mainta		
Take home points		
Have a plan 3 tiered options		
Reduced stress/sympathetic tone helps everyone butorphanol 0.3 m/kg IV is never wrong		
Panting may be anxiety-driven, but may also be due to CHF		
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Questions		
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