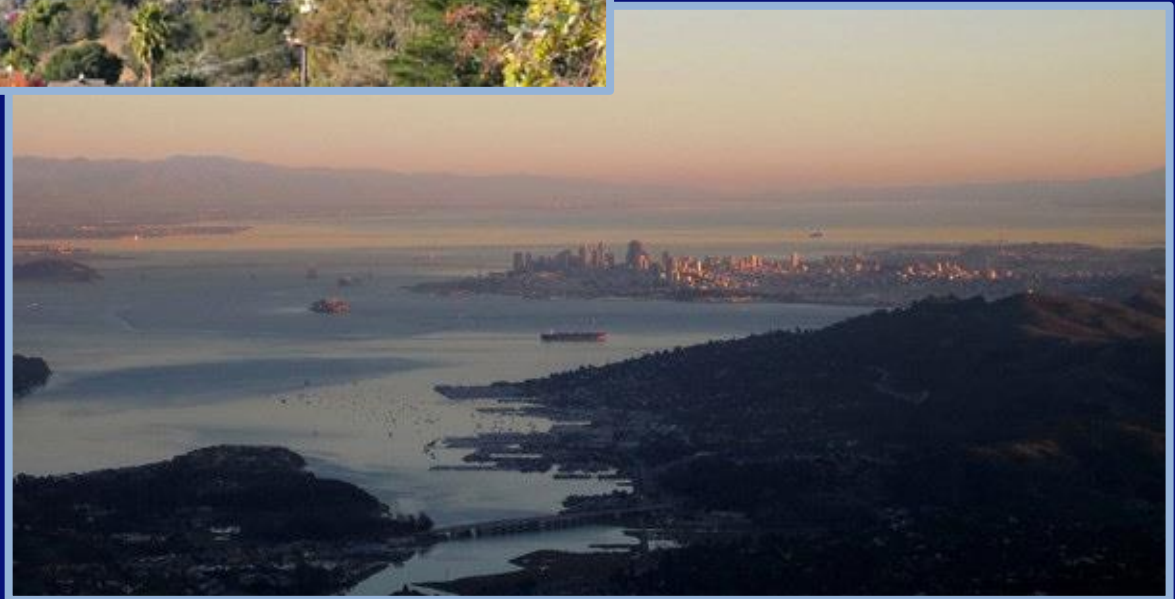
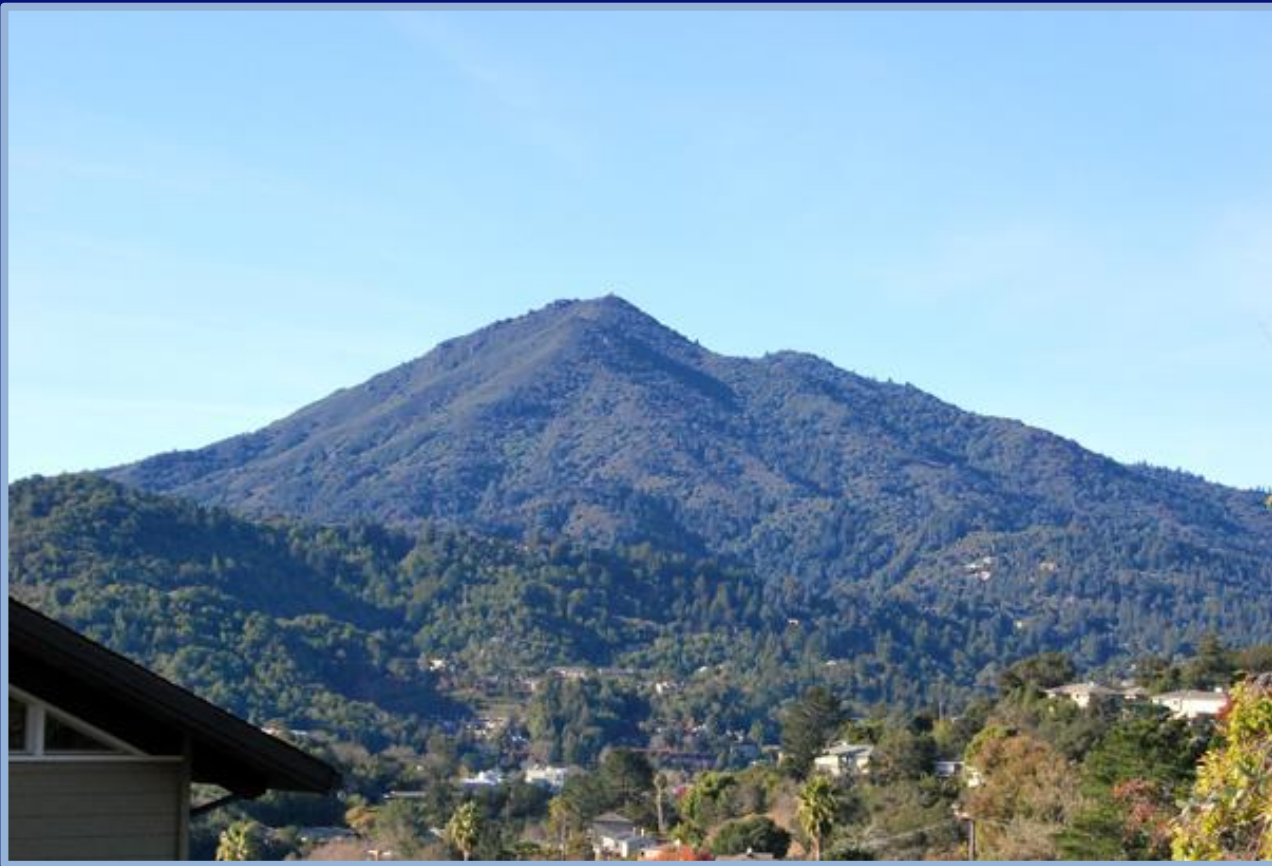


Syncope

Ronn E. Tanel, MD
Pediatric Arrhythmia Service
UCSF Benioff Children's Hospital
Professor of Clinical Pediatrics
UCSF School of Medicine



UCSF Benioff Children's Hospital





17 yo with dizziness and pre-syncope

- Internationally competitive mountain biker
- Headache after dizziness, but no syncope
- Vision changes, confusion, extremity tingling
- Sometimes feels “room is spinning”
- Sometimes appears gray and ashen
- Withdrew from “world’s” due to intense sx
- No palpitations
- Orthostatic VS: Supine P 55, BP 96/60;
 - Standing P 80, BP 99/64
- CBC, electrolytes, and thyroid function normal

17 yo with dizziness and pre-syncope

- ECG and echo normal
- Dizziness and vision change with EST, but no HR or BP change
- Tilt table study: SBP dropped 20 mmHg at 4' and stayed 10 mmHg below baseline throughout. HR increased 57 -> 104 bpm. Lightheaded, dizzy, numbness
- Autonomic testing: mild autonomic neuropathy
- EMG and nerve conduction studies normal
- Vestibular instability due to nystagmus during tilt

17 yo with dizziness and pre-syncope

- Non-pharmacologic measures ineffective
- Midodrine had insufficient effect
- Pindolol failed
- Meclizine modest improvement
- WADA petitioned for fludrocortisone, prescribed, and significantly improved

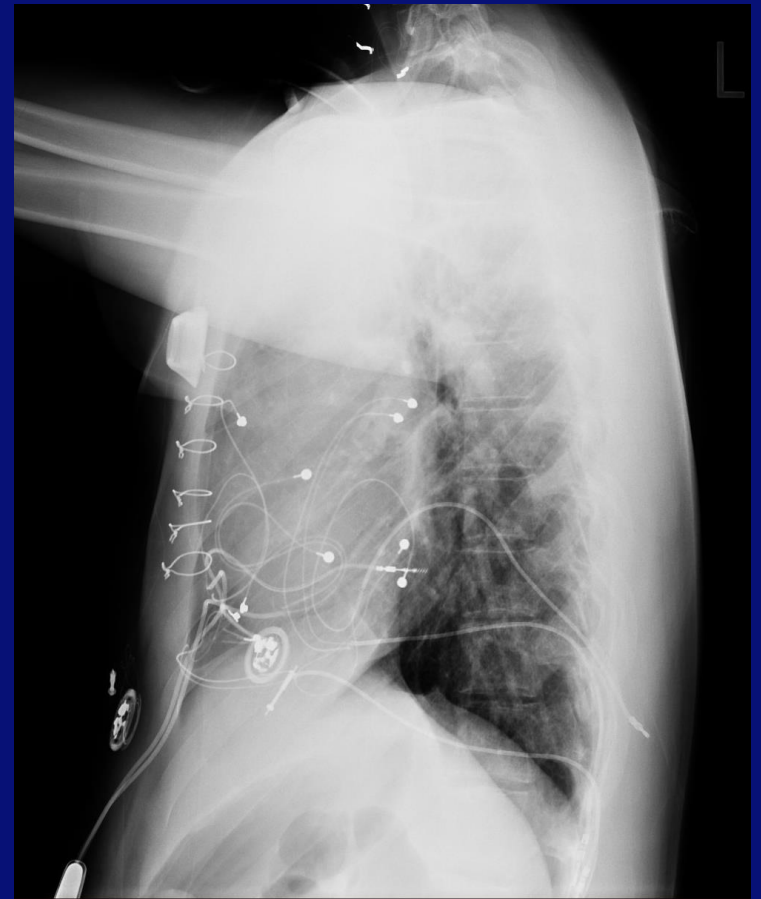
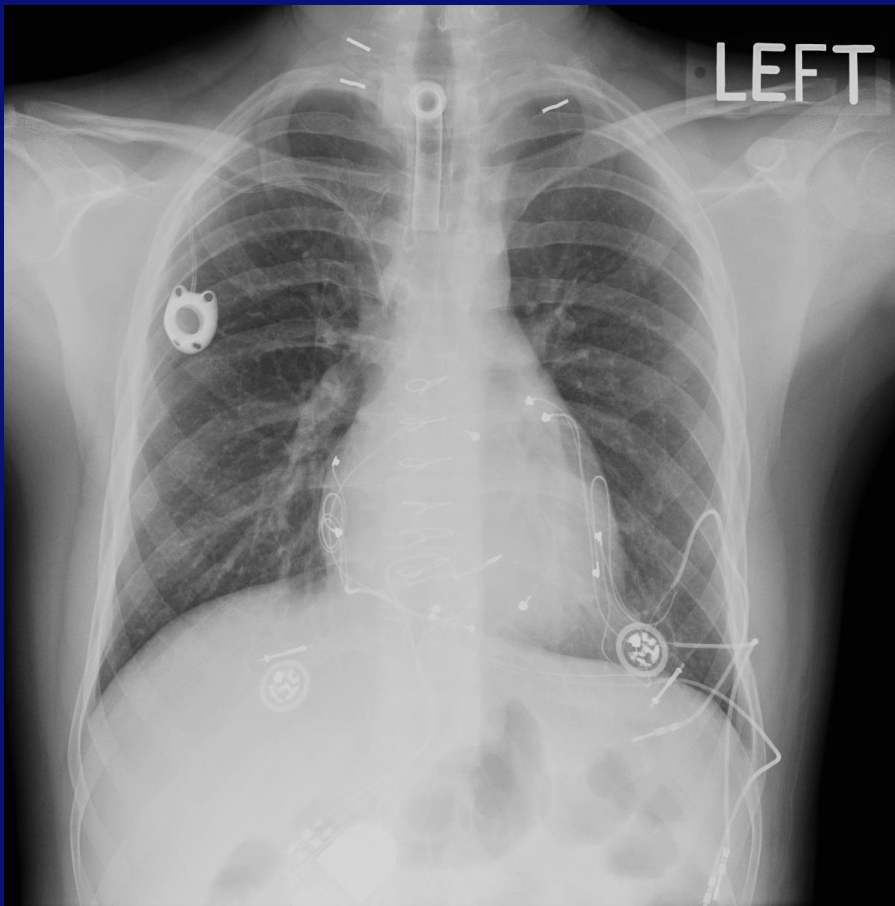
18 yo with congenital central hypoventilation syndrome

- Dysautonomia, IST, atrial arrhythmias
- AV node ablation/attempted SN modification
- Dual chamber epicardial pacemaker w revisions
- Tracheostomy
- Nocturnal bilateral diaphragmatic pacing
- Gastric dysmotility, gastrostomy tube
- Gradual development of worsening dizziness, weakness, fatigue, vision changes, pallor

18 yo with congenital central hypoventilation syndrome

- P 88, BP 85/55, P 88
- ECG and echo unremarkable
- Labs: mild CO₂ retention, o/w reasonable
- Cannot tolerate large volumes in G-tube due to gastric dysmotility
- Atenolol long-standing for IST, increased
- Florinef added
- Midodrine added

18 yo with congenital central hypoventilation syndrome



16 yo with exertional syncope

- Celiac disease, gluten-free diet
- History of GERD
- Exercise-induced asthma
- Good athlete; rows
- 3 weeks URI symptoms
- At midnight, she was running home to avoid be late for curfew
- Chest pain, palpitations, shortness of breath, vision changes. Brief LOC
- Pale and diaphoretic, no incontinence
- 2 weeks later, she had similar symptoms while bicycle riding

16 yo with exertional syncope

- Brief LOC and chest wall bruise
- Orthostatic VS unremarkable
- Normal ECG, echo, and ambulatory monitor
- At 13.5 min, stage V, Bruce protocol, the test was terminated for pallor and drop in SBP. She reported chest pain and dizziness. The SBP dropped from 136 to 90 mmHg.