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An interesting case of syncope

August 2005

White 10, Team C – Massachusetts General Hospital,
Boston – MA, USA

History of present illness

- DAK is a 78 y.o. male with history of CAD, PE, recurrent DVT, COPD, DM, presenting with syncope.
- The pt. reports that he was in his usual state of health on the morning of the admission.
- He took his medications but had not yet eaten breakfast, and he was sitting in his chair. He stood up from the chair, took two steps, and the next thing he remembers is that he was hanging onto his TV, after having fallen forward onto it.
- He noticed pain in his head and in his L leg. After this loss of consciousness, the pt. reported feeling dizzy, confused and having difficulties walking.
- He denied chest pain, palpitations, SOB, nausea, vomiting or diaphoresis.

History of present illness

- The pt. called EMS, who transported him to the MGH ED.
- There, he had a laboratory evaluation that revealed –ve cardiac enzymes, no significant electrolytes abnormalities, no urinary infections, and INR of 2.9 (he is taking Coumadin for recurrent DVTs). His pacemaker was funcioning normally, without any recorded events the morning of the admission to explain the syncope.

History of present illness

- Chest x-ray showed cardiomegaly.
- Head CT did not reveal any acute bleeding.
- Plain x-rays of the left leg showed no fractures.
- The patient was then admitted for further work-up of his syncope.
- At the admission on White 10, he denied any pain, except in his L leg, stated that he felt “a little light-headed”, and reported that he was unsure of getting up and walking, because of unsteadiness and fear of the L leg injury.

History of present illness

- The pt. reports that he has only had one episode like this in the past, a little less than a year ago, when he went into an atrial arrythmia.
- He denied orthopnea, PND, history of stroke or any symptoms of weakness, but reported SOB on exertion after walking for a small distance.
- He reported that he had had several occasions where he had noticed that he felt to his left side when walking. These episodes resolved on their own and happened infrequently.

Review of systems

- No fever, chills, nausea, vomiting, chest pains, palpitations.
- No orthopnea/PND.
- No cough/hemoptysis/wheezing/sore throat/rash.
- No hematochezia/melena.
- No alterations of mental status.
- No slurring of speech or unilateral weakness.
- No dysuria.
- No exposures/ingestions/recent travel.

Past medical history

- **CAD** – Angiography (2/2000), showing diffuse coronary disease, without focal stenosis. Echo (10/2004), showing EF 57% with LVH and without wall motion abnormalities or significant valvular disease. Dipyridamole MIBI 3/2005, showing normal myocardial perfusion and LVEF 46%.

Past medical history

- **Atrial fibrillation** – s/p ablation. With pacemaker (VVIR). Interrogation on admission showed AF with ventricular rate of 30 bpm.
- **PE/DVTs** – Pulmonary embolism (1970), history of recurrent DVTs. On chronic Coumadin. IVC filter.
- **DM** – oral therapy and diet. Controlled.
- **COPD**
- **Glaucoma**

Past medical history

- s/p cornea transplant
- s/p appendectomy
- s/p hemorrhoidectomy
- Cholelithiasis

Medications on admission

- Rosuvastatin (Crestor) 20 mg QD
- Glipizide 5 mg QD
- Pantoprazole (Protonix) 40 mg QD
- Warfarin (Coumadin) 10 mg QAM
- Isosorbide mononitrate sustained release 120 mg QD
- ASA 325 mg QD
- Atenolol 50 mg QD

Medications on admission

- Furosemide (Lasix) 20 mg QD
- Lisinopril 20 mg QD
- Beclomethasone nasal spray one puff BID
- Albuterol PRN

- **Allergies** – past history of nausea on penicillin, but on admission the pt. claims he had no problems with penicillin.
- **Social history** – History of heavy drinking and smoking (120 pack-year), but quitted 35 years ago. Used to work as a Merchant Marine and commercial fisherman. Originally from Ireland. Widow. Lives alone.
- **Familial history** – Father died of MI, mother of "booze", brothers of lung cancer.

Physical exam

- Vital signs – T 96.6, HR 60, BP 144/80, RR 20, SaO_2 99% RA
- Orthostatics – supine BP 115/62, HR 62; sitting BP 126/75, HR 66; standing BP 124/71, HR 70
- General – obese, non-apparent distress
- HEENT – PERRL, EOMI, sclera anicteric
- Neck – supple, left mass, no carotid bruits, JVP difficult to appreciate
- Nodes – no cervical or supraclavicular LAD
- CV – RRR, S1 & S2 nl, 1/6 systolic murmur heard best at LUSB. No S3, S4.

Physical exam

- Chest – fine crackles at L base, poor air movement bilaterally, otherwise CTA.
- Abdomen - +BS, NT, ND. No HSM. No peritoneal signs.
- Ext – 1+ edema bilaterally w/ evidence of chronic venous stasis changes, hematoma L knee
- Skin – no rashes
- Neuro – A&Ox3; CN II-XII intact, Romberg –ve, FTN showed dysmetria, poor rapid alternating movements.

Labs and studies

Blood

Na^+	140	(135-145)	mmol/l
K^+	4.7	(3.4-4.8)	mmol/l
Cl^-	110 (H)	(100-108)	mmol/l
CO_2	26.3	(23.0-31.9)	mmol/l
BUN	30 (H)	(8-25)	mg/dl
Creatinine	1.3	(0.6-1.5)	mg/dl
Glucose	97	(70-110)	mg/dl

Labs and studies

Blood

CK-MB	Negative	Negative
Troponin-I	Negative	Negative

Labs and studies

Blood

RBC	4.17 (L)	(4.50-5.90)	$\cdot 10^9 / mm^3$
HCT	36.5 (L)	(41.0-53.0)	%
Hb	11.5 (L)	(13.5-17.5)	g / dl
MCV	88	(80-100)	fl
MCH	27.5	(26.0-34.0)	pg
MCHC	31.4	(31.0-37.0)	g / dl
RDW	15.1 (H)	(11.5-14.5)	%

Labs and studies

<u>Blood</u>

WBC	7.5	(4.5-11.0)	$\cdot 10^3 / mm^3$
PLT	168	(150-350)	$\cdot 10^3 / mm^3$
PT	21.3 (H)	(11.3-13.3)	s
APTT	39.7 (H)	(22.1-35.1)	s

Labs and studies

Urine

Specific gravity	1.025	(1.001-1.035)	kg/l
pH	5.5	(5.0-9.0)	
WBC screen	Negative	Negative	
Nitrite	Negative	Negative	
Albumin	3+	Negative	
Glucose	Trace	Negative	
Ketones	Negative	Negative	
Occult blood	Trace	Negative	

Chest X-Ray

Chest X-Ray

- Stable moderate cardiomegaly, with no evidence for pulmonary edema.

Head CT

Head CT

- No evidence of traumatic injury or acute intracranial pathology.

KEHOE, DANIEL ID:003229121 06-AUG-2005 07:19:00 MASS GENERAL HOSPITAL

19-DEC-1926 (78 yr)
Male

Room:BAY7
Loc:110

Vent. rate	62	BPM
PR interval	45	ms
QRS duration	133	ms
QT/QTc	429/436	ms
P-R-T axes	* -71	98

NORMAL SINUS RHYTHM WITH SHORT PR
LEFT AXIS DEVIATION
LVE WITH SECONDARY QRS WIDENING AND REPOLARIZATION ABNORMALITY
INFERIOR MYOCARDIAL INFARCTION (CITED ON OR BEFORE 06-AUG-2005)
ANTEROLATERAL INFARCT (CITED ON OR BEFORE 06-AUG-2005)
ABNORMAL ECG
WHEN COMPARED WITH ECG OF 17-SEP-2004 11:55,
PREVIOUS ECG HAS UNDETERMINED RHYTHM, NEEDS REVIEW
SERIAL CHANGES OF ANTERIOR INFARCT PRESENT

Referred by: Unconfirmed

25mm/s 10mm/mV 100Hz 005C 12SL 86 CID: 1 EID:Unconfirmed EDT: ORDER:

ECG

- V-paced
- HR 60
- No underlying coordinated atrial depolarization

Assessment and plan

- DAK is a 78 y.o. male with history of CAD, AF, PE/DVTs, on chronic coumadin, with syncopal episode and fall on the day of admission.

1) Syncope

- The patient's history points towards orthostatic syncope. The pt. continued to have some dizziness even though he was not orthostatic when he arrived at White 10, which lessens the likelihood that orthostasis will be able to explain the whole picture. Arrythmia is not likely the cause of the syncope, as the pacemaker did not show any abnormal events. Neurologic etiology could be possible. Head CT was –ve for acute process, but the patient did have suspicious signs and symptoms (dizziness, dysmetria, gait difficulty)

Assessment and plan

- Plan
  - Central telemetry overnight
  - 250 cc bolus (normal saline)
  - Transcranial doppler to evaluate posterior circulation

Assessment and plan

2) Heart

- Rhythm – monitor for any arrythmias
- Pump – last Echo revealed an EF of 57%. The patient does not clinically appear to be in heart failure (no pulmonary edema on CXR, JVP difficult to appreciate), but does have peripheral edema and SOB on exertion (though confunded by COPD).
  - Continue beta-blocker, ACE-i and Lasix as at home
- Ischemia – no CP, first set of enzymes –ve.
  - Continue monitoring enzymes.

Assessment and plan

3) L leg pain

- The patient has difficulty walking due to his recent injury.

- Plan
  - Tylenol or Percocet for pain as needed
  - PT consult to assist the patient with walking and rehabilitation from injury

Assessment and plan

4) Anticoagulation

- The patient is chronically on Coumadin.

- Plan
  - Continue Coumadin and monitor INR

Assessment and plan

5) COPD

- Plan
  - Advair BID nad Albuterol PRN

On further testing

- Carotid duplex US revealed mass in the neck on the left, recommended neck CT
- Neck CT revealed neck mass compressing the internal carotid artery.

Neck vascular US

Neck vascular US

- Large hypoechoic lesion in the left carotid space, displacing the internal jugular vein anteriorly and the left common carotid artery posteriorly and medially.
- This lesion, due to its echogenicity may correspond to schwannoma, lipoma, less likely muscle-derived tumor.
- This lesion may compress several cranial nerves, such as vagus or glossopharyngeal and may be the origin of the patient’s syncopal episode.

Neck CT

Neck CT

Neck CT

- Large lipoma arising within the left carotid sheath, with mild compression of the supraglottic larynx and marked compression of the left internal jugular vein.
- Atherosclerotic disease with approximately 50% narrowing of the proximal left internal carotid artery, and slightly less narrowing of the proximal right internal carotid artery. There is also moderate focal narrowing of the right vertebral artery.

Conclusions

- We believe that the patient’s syncope was due to reduced blood flow to the brain caused by the contemporary presence of a large lipoma compressing the left common and internal carotid arteries, and a moderate atherosclerotic narrowing of the same vessel.
- We asked for an ENT consult, which informed us about the difficulty of a surgical removal of the lipoma, due to its proximity to the larynx. Therefore, we suggested a conservative managment and an ENT follow up.