Case Reports

A WOLF IN SHEEP’S CLOTHING:
PAINLESS TYPE A THORACIC AORTIC DISSECTION PRESENTING AS TIA

K. Peacock, B. Madigan, D. Little

Royal United Hospitals Bath NHS Foundation Trust, Bath, United Kingdom

A 70 year old retired carpenter was referred to the rapid access weekend TIA clinic as high risk after developing sudden onset of L leg numbness/weakness the previous day. He had felt lightheaded and faint prior to symptom onset. The episode lasted approximately 30 minutes. He denied any other focal neurology He also denied any episodes of chest pain or neck pain. He had felt tired/lacking energy the previous two weeks.

Past medical history: Polymyalgia Rheumatica (previously on steroids but not for a number of years), Osteoporosis, L total hip replacement, L shoulder tendon pain, right inguinal hernia repair, benign prostate hyperplasia, Non smoker, ETOH 42 units/week, Medications: Alendronate, Tamsulosin, Omeprazole, Tramadol/Ibuprofen prn

On examination:
No focal neurology, BP 124/68 sitting, 126/68 standing, HS soft systolic murmur.

Investigations:
ECG: Sinus rhythm, Chest X-ray: not done

Initial Plan:
CT angio as no carotid duplex USS available at weekends to assess carotids
Outpatient 24hr tape/ECHO
Driving advice, reduce ETOH intake
Commence Clopidogrel/Atorvastatin

The initial CTA from aortic arch to circle of Willis revealed a Type A aortic dissection (**Picture A**). An extended CTA from aortic arch to the pelvis revealed that the dissection extended from aortic arch all the way to the aortic bifurcation, including the brachiocephalic artery (**Picture B** – arrow), with the R renal artery emerging from the false lumen.

Discussion:
Classically, 90 % of patients with acute aortic dissections present with chest pain (often radiating to the back) with hypotension and/or syncope¹. Painless presentation of aortic dissection is relatively rare (6.4 %²) and the affected patients are generally older (mean age 67 vs 64 years)³, it is however more common in Type A dissections which involve the ascending part of the aorta (75 vs 65 %). Furthermore, syncope, heart failure and stroke were also more common on presentation in painless dissection. Syncope can indicate cardiac tamponade or involvement of the brachiocephalic artery as in our case⁴.

Neurological symptoms were significantly more common in painless dissection and often transient³ and can be classified in ischemic stroke/TIA, spinal cord ischaemia and ischemic neuropathy. Ischemic stroke in this patient group affected predominantly the right hemisphere³.

Conclusion:
Patients with aortic dissection can present with neurological symptoms without pain. When assessing patients with new focal neurological deficit – transient or persistent - one needs to be mindful of this differential diagnosis, especially in patients who present with added symptoms such as syncope, seizure or mixed central and peripheral neurology. This is particularly important when assessing patients presenting with persistent symptoms when thrombolysis is considered.

References:

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- 2 Park SW, Hutchison S, Mehta RH, Isselbacher EM, Cooper JV, Fang J, Evangelista A, Llovet A, Nienaber CA, Suzuki T, Pape LA, Eagle KA, Oh JK (2004) Association of painless acute aortic dissection with increased mortality.; *Mayo Clin Proc.* 79(10):1252.
- 3 Gaul C, Dietrich W, Friedrich I, Sirch J, Erbguth FJ SO, (2007) Neurological symptoms in type A aortic dissections.; *Stroke.* 38(2):292. Epub 2006 Dec 28.
- 4 Nallamotheu BK, Mehta RH, Saint S, Llovet A, Bossone E, Cooper JV, Sechtem U, Isselbacher EM, Nienaber CA, Eagle KA, Evangelista A , (2002)Syncope in acute aortic dissection: diagnostic, prognostic, and clinical implications; *Am J Med.*113(6):468.

Outcome:
Our patient was transferred to the regional cardiothoracic centre where he underwent repair of his dissection the next day. Post operatively he was found to have a spinal infarct (arrow right) which resulted in bilateral leg weakness and urinary retention. He also developed steroid induced Type 2 Diabetes. Post neuro rehab he is now mobile with crutches and self catheterises.