CASE REPORTS

Warfarin-associated thoracic aortic dissection in an elderly woman

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Abstract

Background: the risk/benefit ratio of warfarin therapy changes in the over 75s, when haemorrhagic side-effects become more common. These may not always be reported in the literature.

Case report: a woman of 80 years, on long-term warfarin therapy presented with an acute dissecting thoracic aortic aneurysm; on investigation the only precipitating factor found was an international normalised ratio of 4.8. This patient, who also had an abdominal aortic aneurysm, survived, on discontinuation of her anticoagulant therapy.

Conclusions: we describe a previously unreported complication of warfarin therapy in a patient over 75 years of age, to add to the cautions in prescribing this drug in patients of this age group.

Keywords: dissecting, aneurysm, aorta, warfarin, elderly

Introduction

Warfarin is used in the treatment of many diseases and has well known adverse effects, mainly haemorrhagic, which become increasingly common in patients over the age of 75 years. It is well documented that the margin between safety and risk narrows in this age group [1].

Excessive anticoagulation has been shown to occur commonly in older patients on this drug. A recent study found an international normalised ratio (INR) of >6 (normal therapeutic target: 2–3.5) in 11% of a series of patients while on this drug. This was more frequent in the elderly, occurring in 58% of patients over the age of 75 years [2]. A more recent study showed that bleeding while on warfarin in people over the age of 65 years occurred in 50% of cases if the INR was 4 or above, compared with a bleeding rate of 1.6% in age and sex matched controls [3].

Bleeding complications of warfarin therapy seldom appear in the medical literature. We describe here a patient with a serious haemorrhagic complication which has not been previously reported.

Case report

A woman aged 80 years, was admitted to hospital with a four-week history of low thoracic back pain of sudden onset and steady character. This pain later radiated to the left anterior chest wall and lower sternal area. The pain was worse on moving her trunk and on walking. She also complained of general malaise, loss of appetite and weight. She also has chronic bronchitis and had been more short of breath than usual. She had been a cigarette smoker, 20/day, since the age of 15.

Past medical history

Past medical history included myxoedema, diagnosed 2 years previously, hypertension for 9 years, acute myocardial infarction and atrial fibrillation 2 years prior to this admission. She had been on warfarin of variable dose since then. The INR had been maintained between 2 and 3 with monthly monitoring. Control had been adequate until an INR around the time of the onset of symptoms was 7.8. She had been assessed but the symptoms were not felt to be related to the prolonged INR. The warfarin was discontinued temporarily then restarted. The INR readings were 1.7 and 1.9 between this time and the admission episode. There had been no other change in medication.

Drugs

Drugs taken were warfarin 3/1 mg alternate days, digoxin 125 mcg daily, sotalol 40 mg twice daily, thyroxine 50 mcg daily and nifedipine (slow release) 40 mg daily.

Examination

On examination she was short of breath at rest. Her cardiovascular system blood pressure reading was 118/80 in both
On follow-up 1 month later, her pain had resolved and she had restarted smoking. Seven months later she remained stable, in sinus rhythm and able to go outside and to local shops. A repeat contrast enhanced CT showed free communication between true and false lumen superiorly and inferiorly. Between them, the false lumen had been obliterated.

**Discussion**

Acute dissection in an atherosclerotic aneurysmal aorta is unusual [4]. Our case is a previously unreported occurrence of an acute thoracic aorta dissection, associated with a high INR due to warfarin, in an elderly patient who also had a large fusiform abdominal aortic aneurysm. At the time of her admission to hospital her BP was adequately controlled; the only precipitating factor identified was an increased INR of 4.8. We therefore speculate that the mechanism of aortic dissection was a bleed into an atheromatous plaque in the thoracic aorta just above the diaphragm, related to her warfarin therapy.

The indication for warfarin had resolved, as she was no longer in atrial fibrillation. A search of the literature has failed to produce another case report of thoracic aortic dissection in this situation, whereas there are numerous reported cases of aortic dissection occurring during thrombolytic therapy.

The 1996 Stroke Prevention in Atrial Fibrillation (SPAF) study showed a rate of major haemorrhage of 4.2% per year in patients >75 years of age [1]. Another study showed that in patients on long term warfarin there was a 32% increase in all forms of bleeding, and a 46% increase in major bleeds for every 10 years of age over 40 years [5].

Although we are surprised that there has not been a similar case hitherto reported in the medical literature, we wonder whether aortic dissection is rare in this setting. Mortality from acute thoracic aortic dissection, if left untreated, is high (having been reported as 32–72% within 48 hours of diagnosis; and 62–92% within 1 week [6]). Although mortality of survivors of type B dissection on medical therapy is not as high, we speculate that this condition is either rare, or underreported on account of its high mortality.

**Key points**

- The risk benefit ratio of anticoagulation reduces with increasing age.
- Excessive anticoagulation becomes more common in older people.
- Haemorrhagic complications are well recognised, with this case illustrating another which is previously unreported.

**References**

Continuous machinery murmur in an octogenarian

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Abstract

Background: sinus of valsalva aneurysm is a rare congenital anomaly and usually presents in adolescence to early adulthood. Manifestations are varied, ranging from asymptomatic murmur to sudden death.

Case report: an elderly male presented with chest pain and machinery murmur, which was confirmed as ruptured sinus of valsalva aneurysm on echocardiogram. Emergency surgical repair led to a successful outcome.

Discussion: review of the literature revealed that this patient is the oldest reported case. Urgent echocardiography and surgical advice are essential. This condition is potentially treatable even in the older age group and the prognosis is good after surgical repair.

Keywords: sinus of valsalva aneurysm, rupture, older

Case Report

Sinus of valsalva aneurysm (SVA) is an uncommon condition, especially in the elderly, but it is a condition with varied manifestations. An 80-year-old male non-smoker with no previous ischaemic heart disease was admitted with sudden chest pain radiating to the back, associated with breathlessness. In the past, he had chronic airways disease managed by inhalers. Examination revealed a collapsing pulse: 84 beats/min in sinus rhythm, blood pressure (BP) 200/70 mmHg with no difference in BP in the two arms and continuous machinery murmur heard all over the precordium. ECG and chest X-ray were unremarkable, and serum troponin T was not elevated. An urgent chest CT did not reveal any aortic dissection. An urgent transthoracic echocardiogram showed a rupture of the right SVA into the right outflow tract (Supplementary figure 1a and b available at http://www.ageing.oupjournals.org). The patient was transferred to the regional cardiothoracic centre where right heart catheterisation revealed saturation of 60% in the right ventricle and 82% in the pulmonary artery. Angiography revealed mild plaque disease in the coronary tree. An emergency repair of the ruptured SVA was performed (Supplementary figure 2a and b). Postoperatively, the patient required inotropic support, ventilatory support and venovenous haemofiltration for two days. The remaining course was satisfactory and he was discharged home.

Discussion

SVA was described as ‘a rare congenital anomaly’ by John Thurnam in 1840. A congenital SVA is usually clinically silent, but manifestations may vary from a mild asymptomatic dilatation detected on routine two-dimensional echocardiogram...