

# Carotid Endarterectomy in two persons with Haemophilia

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## Introduction:

Controversy exists as to whether persons with haemophilia (PWH) are protected against arterial disease and it appears that with increased life expectancy, haemophilia teams are now facing the challenges of treating arterial disease in this group. Studies have shown that in PWH the prevalence of risk factors for arterial disease is similar to that in control groups. In addition recent studies have shown that PWH do not appear to be protected against development of atherosclerosis as measured by coronary calcification score (CACS) and carotid intima media thickness (IMT) and the extent of atherosclerosis is related to risk factors for arterial disease. Here we describe two cases of embolic stroke in PWH secondary to carotid artery atheroma and subsequent carotid endarterectomy, in two Haemophilia Centres in London, UK.

## Case 1

64 year old man with mild Haemophilia B (factor IX 7iu/dL), hypertension, type 2 diabetes and a heavy smoker, presented with a one day history of slurred speech, left arm numbness and weakness. CT head showed cerebral infarcts in left basal ganglia and subcortical white matter of the right frontal lobe. An arterial duplex scan showed >90% stenosis of the right carotid artery. He had a right carotid endarterectomy initially with cover of a continuous infusion of Benefix, thereafter followed by boluses for 7 days. He re-presented 21 days later with neck swelling around the surgical site. A right carotid pseudotumour was diagnosed, which was excised with Benefix cover.

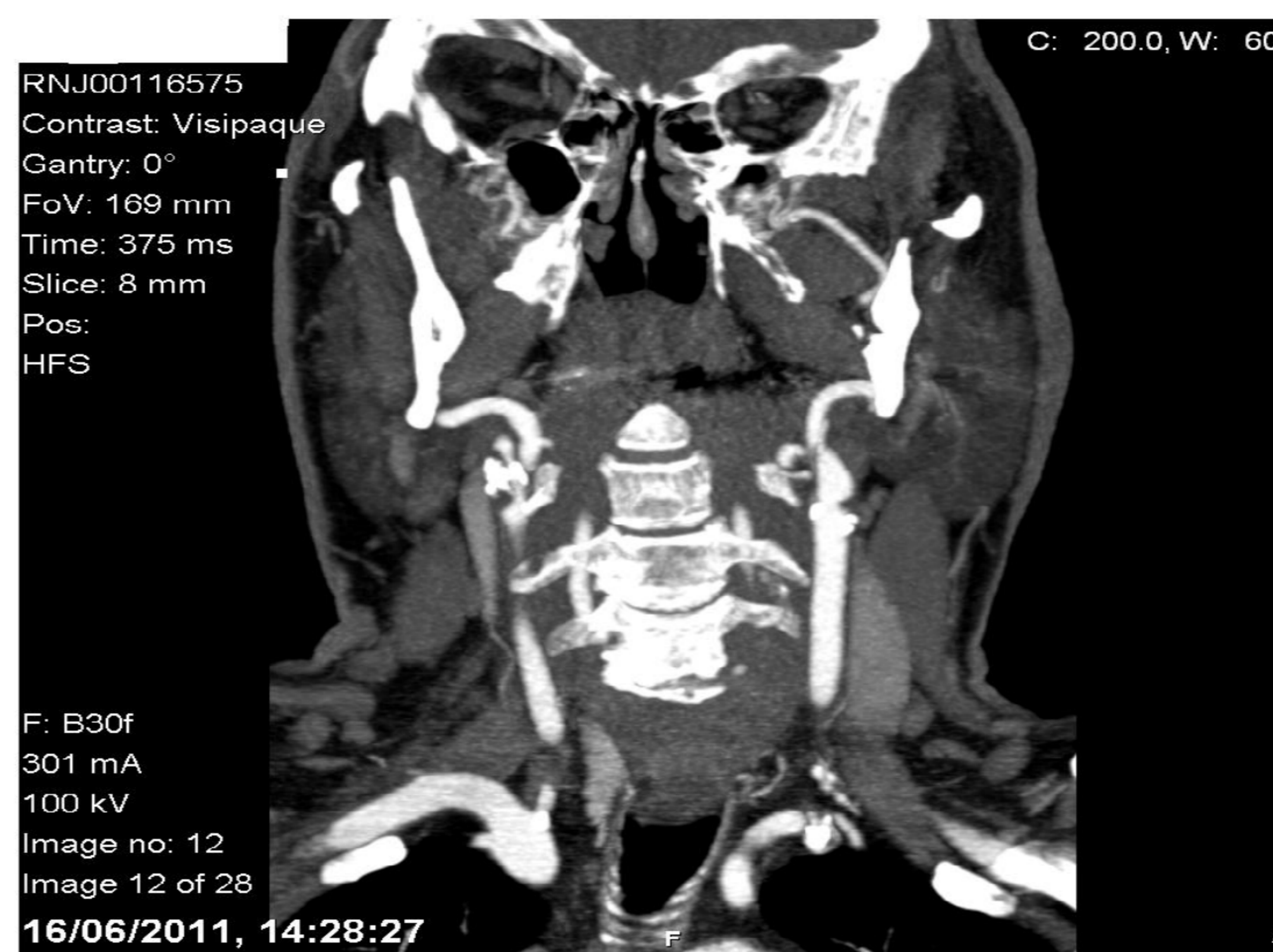
Figure 1: Carotid pseudotumour



## Case 2

73 year old man with mild Haemophilia A (factor VIII 8iu/dL), previous coronary artery bypass graft, hypertension and an ex-smoker, presented with left sided facial and left arm weakness. He was on long term aspirin. A CT head revealed no bleed. CT angiogram of the carotids showed 70-90% stenosis of the right coronary artery. He underwent a right carotid endarterectomy under local anaesthesia with the cover of Refacto AF boluses. Post operatively he received 10 days of factor VIII cover with good healing and has no residual neurological deficits. His Aspirin was changed to Clopidogrel and he has had no bleeding symptoms.

Figure 2: CT angiogram showing >70% stenosis right carotid artery



## Discussion:

The North American Symptomatic Carotid Endarterectomy Trial (NASCET) and the European Carotid Surgery Trial (ECST) are both large randomized control studies which have helped define current indications for carotid endarterectomy. These studies show that for patients with >70% carotid stenosis and a recent TIA, carotid endarterectomy results in a significant reduction in recurrent stroke in the long term. The NASCET found that for every six patients treated, one major stroke would be prevented at two years for symptomatic patients with a 70–99% stenosis. Peri-operative combined mortality and major stroke risk is 2–5%. Clearly these large studies are in subjects without bleeding disorders and there may be a shift in the risk vs benefit for PWH, however suitable PWH should be considered for this procedure on an individual basis and in consultation with Haemophilia specialists and neurosurgeons. These cases show that carotid endarterectomy can be performed safely with appropriate factor concentrate cover. However, challenges remain regarding on-going anti-platelet use and the risk of bleeding and post-surgery prophylaxis especially in those not able to self-administer treatment. We believe these cases are indicative of the shifting landscape in Haemophilia care towards the ageing person and their co-morbidities.

## References:

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