A 34 year old man of Caribbean descent presented to the accident and emergency department with a two week history of upper abdominal pain. The pain was described as a dull ache with no exacerbating or relieving factors. There were no other symptoms and no recent travel abroad. His past medical history included a left inguinal hernia repair and ruptured left Achilles tendon repair. He was a non-smoker with no cardiovascular risk factors. On examination he was a muscular and fit young man. His blood pressure was 160/100 mm Hg and he was apyrexial. Abdominal examination revealed tenderness in the epigastrium. No expansile mass was noted. The rest of the examination was normal.

An urgent abdominal ultrasound scan was performed, which revealed an infrarenal abdominal aortic aneurysm measuring 5.5 cm in the anteroposterior diameter. The rest of the ultrasound examination was normal. Computed tomography of the thoracic cavity revealed no abnormality of the thoracic aorta. Duplex ultrasound of the lower limb vessels showed no evidence of iliac, femoral, or popliteal aneurysms. His haemoglobin concentration and white cell count, lipid profile, erythrocyte sedimentation rate, C-reactive protein, liver enzymes, plasma proteins, rheumatoid antibodies, antinuclear antibodies, antineutrophil cytoplasmic antibodies, sickle screen test, and serum protein electrophoresis were all normal.

A working diagnosis of a mycotic aneurysm was made. A septic screen was performed and no source of infection was found. The patient underwent urgent abdominal aortic aneurysm repair on the next available list. At operation, an infrarenal aortic aneurysm was found. It was not an inflammatory nature nor atherosclerotic. The rest of the laparotomy was normal. An 18 mm gelatin sealed, knitted Dacron polyester tube graft was used to replace the aneurysm. Postoperative recovery was unremarkable and the patient was discharged home eight days later.

Histological examination of the resected aneurysm specimen ruled out the presence of any connective tissue abnormality. A skin biopsy ruled out connective tissue disease.

**DISCUSSION**

This is a unique case of an abdominal aortic aneurysm in a young man of Caribbean descent. Abdominal aortic aneurysms are considered to be primarily a disease of the elderly and are uncommon before the sixth decade of life. They are rare in young patients and less common in men of Afro-Caribbean descent. In this case there was a suspicion of connective tissue abnormality. Histological examination of the aneurysm, skin biopsy, and blood tests ruled out this possibility. There has been no study to evaluate the long term durability of these newer grafts.

**Summary points**

- Abdominal aortic aneurysms are rare in young patients and less common in men of Afro-Caribbean descent.
- They can be associated with connective tissue diseases, especially in younger patients.
- There is a recent resurgence of mycotic aneurysms with intravenous drug abuse. A persistent fever without a known source in the presence of a newly discovered aneurysm should alert the physician to the possibility of a mycotic aneurysm.
- Patients can develop graft related complications including rupture of the graft as late as 19 years after surgery.
- There are claims of enhanced strength and stability of newer generation of grafts (like the one used in this patient). There has been no study to evaluate the long term durability of these newer grafts.

A percutaneous transluminal coronary angioplasty procedure is planned.
We used a “Gelsoft plus” type of Dacron graft made by Sulzer Vascutek Ltd, which is a new gelatin sealed koper knitted polyester graft. The manufacturers claim that this new graft provides enhanced strength and radial stability. There are no independent studies to evaluate the long term durability of these newer grafts but a textile analysis performed on a similar 10 year old graft by the manufacturer showed that it had only dilated by 30% with no degenerative changes.

In summary, the case highlights an unusual case of a young man with an abdominal aortic aneurysm of an unknown cause. The patient has a Dacron graft in place, the long term durability of which is not known. He will require long term follow up with the possibility of graft replacement in the future.

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Aortic aneurysm replacement with Dacron graft in a 34 year old man. How long will the graft last?

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