



# Collateral miracle—reformation of iliac and femoral arteries by collaterals from bilateral subclavian arteries following contained rupture of abdominal aortic aneurysm in a hypertensive female

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Rupture of an abdominal aortic aneurysm is readily diagnosed when the triad of abdominal or back pain, shock and a pulsatile abdominal mass are present. However in a few cases, a chronic contained ruptured abdominal aortic aneurysm can present in a multitude of manners rather than as life threatening haemorrhage. In our case we are reporting a 41 year old hypertensive female who developed claudication pain in both her lower limbs. Imaging later revealed that she had a contained ruptured abdominal aortic aneurysm, a thing she was previously unaware of, with collaterals from the bilateral subclavian arteries supplying her femorals.

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A 41-year-old female presented to our institution with a history of severe occasional abdominal pain (for 1 year), associated with bilateral lower limb claudication pain. Results of her computed tomography (CT) aortogram showed a thrombosed contained ruptured aortic aneurysm

just distal to the origin of the celiac artery with nonopacification of the abdominal aorta just distal to the origin of the right renal artery [Figs 1, 2 and 5](#). Opacification of the bilateral common iliac and femoral arteries caused by collateral formation from bilateral subclavian arteries was seen [Figs 2, 3 and 4](#). Elsewhere, Alshafei and Kamal [1] reported a case of a contained rupture abdominal

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Figure 1. MIP CT image of the aorta, showing contained rupture just distal to the origin of the right. CT = computed tomography; MIP = maximum intensity projection.



Figure 2. VRT image showing the course of the collateral on the left side: clear charted one originating from the subclavian artery. VRT = volume rendering technique.



Figure 3. VRT image from the right anterolateral aspect, showing the course of both anterior collaterals. VRT = volume rendering technique.



Figure 4. Close-up VRT image from the left side, showing the origin of the left collateral from the left subclavian artery. VRT = volume rendering technique.



Figure 5. VRT thin images showing the spatial orientation of the bilateral collaterals supplying the common iliac arteries. VRT = volume rendering technique.

aortic aneurysm with intermittent bilateral claudication with an abdominal mass. Meanwhile, Higgins et al. [2], Booth and Galland [3], and other groups reported cases with contained ruptured aneurysm manifesting in various forms [4–7].

All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent was obtained from the participants included in the study.

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