Collateral blood supply to common femoral artery from intercostal arteries

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A 65-year-old man was admitted for peripheral angiography because of intermittent claudication. On physical examination the right femoral pulse was found to be weak. Our first attempt to place the sheath from the right femoral artery failed and so we decided to go on with the radial artery (Figure 1). Contrast injection from the distal aorta revealed totally occluded right common iliac artery with no distal visualization. Since we knew from the first femoral attempt that there was good flow distal to the occlusion, we intentionally searched for possible collateral pathways including the internal thoracic artery (ITA), which is the most reported one. During the

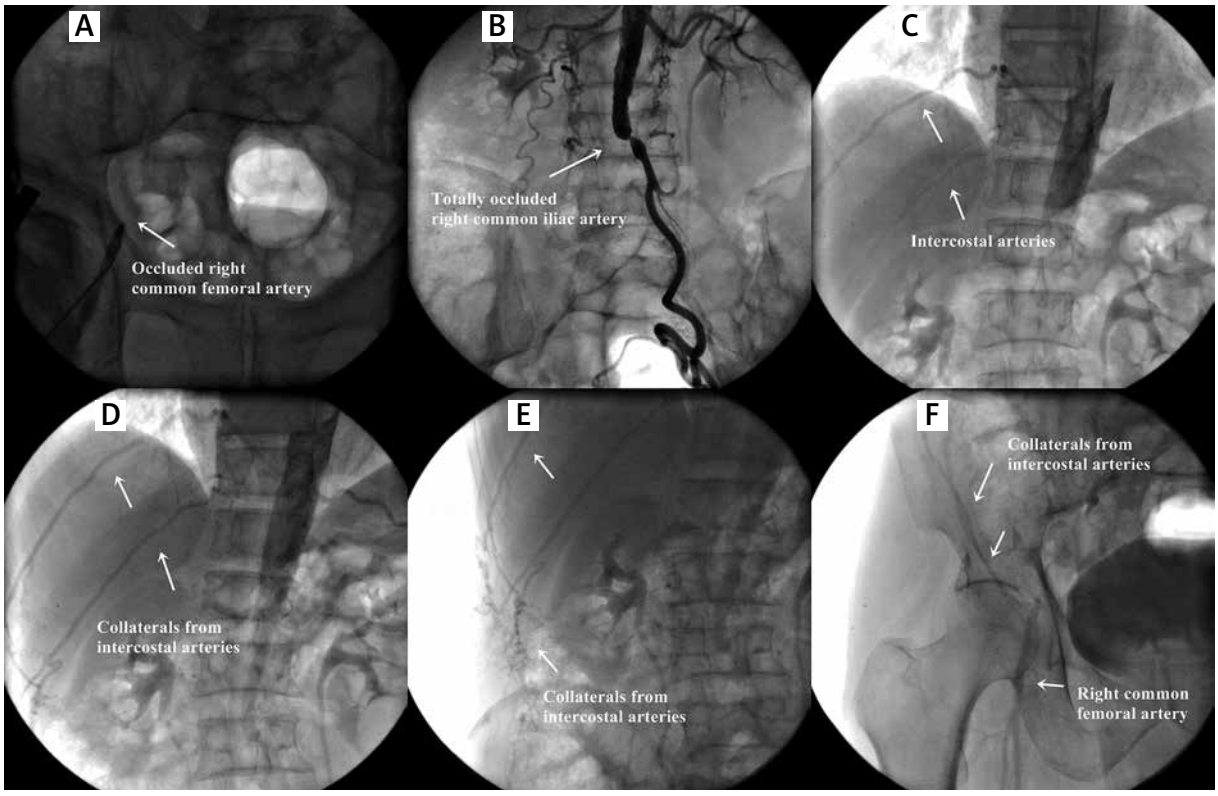

Figure 1. A – Totally occluded right common femoral artery is shown from the retrograde injection. **B** – Totally occluded right common iliac artery is shown from the antegrade aortic injection. **C** – Collateral originating from right intercostal arteries. **D** – Collaterals from intercostal arteries. **E** – Collaterals from intercostal arteries traveling into pelvic region. **F** – Antegrade filling of common femoral artery via collaterals

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abdominal aortic injections, we found the right intercostal arteries supplying blood flow to the iliac and femoral arteries by multiple collaterals.

Generally there are two different types of collaterals in aorto-iliac occlusive disease: systemic-systemic and systemic-visceral. Collaterals arising from the ITA and making end-to-end anastomosis with the inferior mesenteric artery, known as the Winslow pathway, are the most reported type. Rarely collaterals originating from intercostal and lumbar arteries may also supply the necessary blood flow. The importance of these collaterals for the angiographer is that he/she should insist on finding the necessary pathway if there is good arterial visualization past the occlusion. Secondly, these collaterals may be damaged inadvertently during abdominal surgery [1].

References

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