

Case	(109) Common femoral artery thrombosis secondary to bicycle handlebar trauma
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CASE PRESENTATION

8 year-old male who suffered a direct contusion on the left groin after falling on the handlebar of his bike. The patient did not have no pain but coldness and weakness of distal pulses of the left inferior limb. Arterial Doppler sonography and CT angiography of the left limb demonstrated an occlusion of the left common femoral artery secondary to closed trauma.

DISCUSSION

The findings of absence of Doppler signal and weak arterial flow in ultrasound are compatible with acute thrombosis of the common femoral artery, being confirmed in the CT angiography, as an absence of contrast in the same segment, caused by a closed trauma. Acute arterial injuries due to trauma are more frequent after a penetrating trauma that causes direct arterial damage. In the case of closed traumas, they are usually associated with bone fractures, whose fragments damage the arterial wall.

Arterial thrombosis after a closed traumatism without underlying bone fracture is very rare, being the mechanism of production secondary to the compression and sudden decompression of the artery against adjacent bone structures, causing thrombosis due to focal damage of the arterial intima (the innermost layer of an artery). Typically this kind of situation has been described after a bicycle accident where the handlebar hits and abruptly compresses the inguinal region against pelvic bones.

The symptomatology of ischemia is usually subacute, which, together with the absence of bone lesions, causes the diagnosis to be delayed. The symptoms of pain and other signs and symptoms of severe arterial ischemia will occur weeks or even months after the trauma.

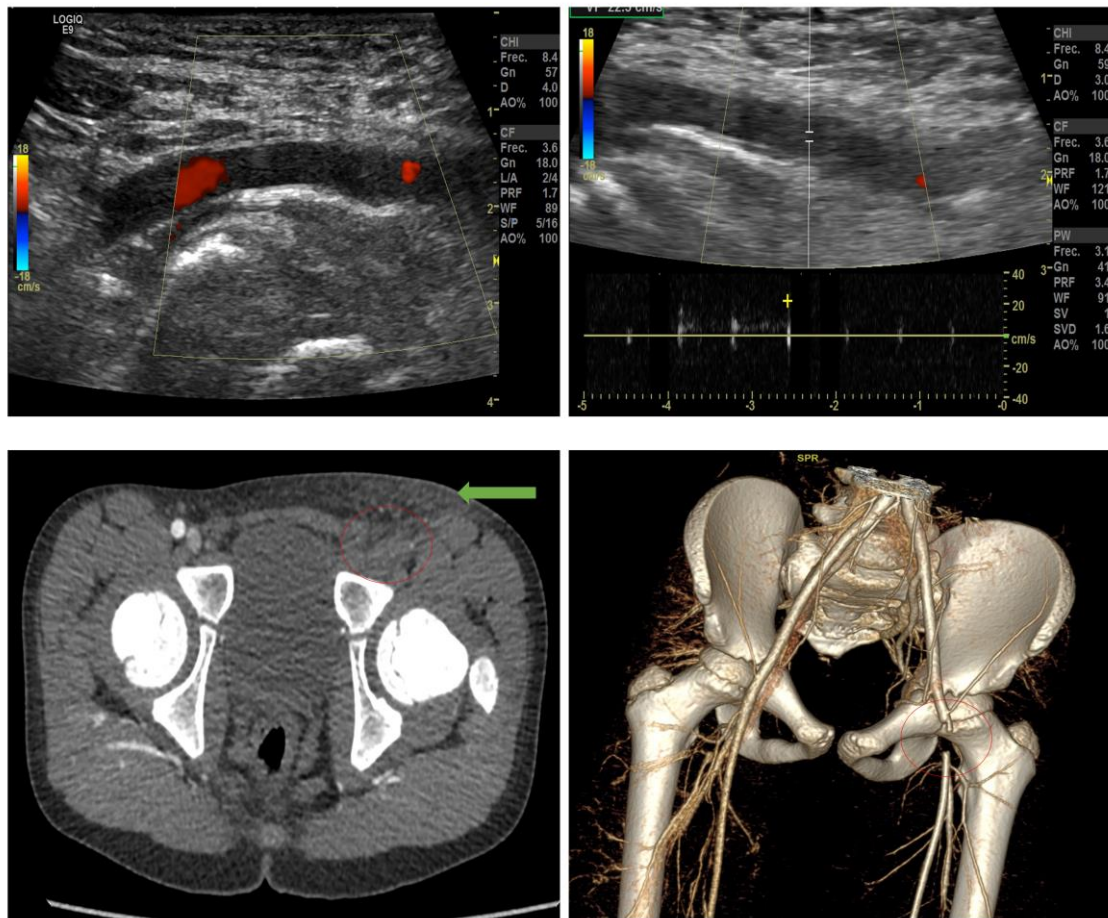
The diagnosis is based fundamentally in the absence of arterial pulses and coldness of the limb associated with skin lesions. Treatment remains controversial, especially in childhood. Primary repair of arterial injuries must be the election treatment when possible. When grafting is required, the use of autologous grafts is preferable to synthetic ones.

In children, there are no studies that support different types of treatment. In our case, we proceeded to perform an autologous venous graft with contralateral greater saphenous vein, evolving favorably.

CONCLUSION

Acute common femoral artery thrombosis due to closed is rare but should be considered a direct contusion with a bike handlebar. Doppler ultrasonography can be used as the

initial approach in case of suspected arterial injury, and it should be always completed with a CT angiography for final diagnosis.



A, B: Arterial Doppler of the left common femoral artery. A segment of the artery is shown which does not show color Doppler signal in addition to a faint arterial flow wave.
C: CT angiography showing absence of contrast in left femoral artery (red circle). Notice a slight hematoma of subcutaneous cellular tissue superior to the arterial occlusion. (green arrow)
D: 3D reconstruction demonstrating the left femoral artery occlusion (red circle) with a distal pass of contrast.

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