

Case	(576) Thrombosis of popliteal artery associated with complete dislocation of the knee
Authors	A. García De La Oliva, D. De Araujo Martins-romeo, A. Rivera Domínguez, L. Cueto Álvarez.
Centre	H. Virgen Macarena. Sas.

CASE PRESENTATION

55 year old male with knee dislocation after traffic accident. Anomalous distal pulses after reduction

DISCUSSION

knee dislocation is a serious emergency due to its association with neurovascular injuries.

Knee dislocations are typically classified in terms of tibial displacement with respect to the femur in 5 main types: anterior, posterior, medial, lateral, and rotary. The most common is the anterior dislocation after forced hyperextension

Vascular integrity should be assessed with CT angiography whenever a dislocation of the knee is suspected. Spontaneous reduction can falsely look like a benign lesion

Abnormal peripheral pulses associated with complete knee dislocation are highly predictive of major arterial injury. If peripheral pulses are normal, a low but definite frequency of arterial damage exists.

The popliteal artery, because of its attachments both proximal and distal to the knee, is injured in approximately 20% to 40% of all knee dislocations. Vascular damage is most common in anterior and posterior dislocations. The vascular damage includes from the tear of the intima to the section of the vessel

Computed tomographic (CT) angiography is a noninvasive and rapid imaging technique that shows high sensitivity and specificity in the detection of arterial injuries in the extremities being the conventional arteriography the current imaging method of choice.

The CT angiographic signs of arterial injuries in the extremities are active extravasation of contrast material, pseudoaneurysm formation, abrupt narrowing of an artery, loss of opacification of a segment of artery, and arteriovenous fistula formation

Deep venous thrombosis has also been associated with knee dislocations. A Doppler ultrasound is often recommended to rule out deep venous thrombosis.

CONCLUSION

Clinical outcome depends on rapid diagnosis and repair of the arterial injury.

Vascular integrity should be always assessed with CT angiography when a dislocation of the knee is suspected.



Anterior dislocation prior to reduction



Sagittal reformatted CT angiographic shows loss of opacification of the popliteal artery (arrow) with distal reconstitution of arterial opacification.



Volume-rendered image helps confirm loss of opacification of the popliteal artery. The flow distally has been recovered by contribution of the collateral circulation

BIBLIOGRAPHY

- Henrichs A. A review of knee dislocations. J Athl Train 2004; 39: 365-9
- Inaba K, Potzman J, Munera F, McKnenny M, Munoz R, Rivas L, et al. Multi-slice CT angiography for arterial evaluation in the injured lower extremity. J Trauma 2006; 60: 502-7.