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Olecranization of the patella in posterior dislocation of the knee with isolated injury of the PCL (About a case)

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Summary
Knee dislocation is a rare but serious injury due to the risk of vascular injury (14 to 65%).
In the absence of vascular lesions, which is an absolute therapeutic emergency requiring emergency surgery, multi ligament injuries of the knee are lesions that are difficult to manage.
We recall a case of posterior dislocation of the knee in a 20-year-old patient, the patient underwent emergency reduction and olecranization of the kneecap, followed by a control CT angiography without vascular injury.

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I. Introduction :

Post-traumatic knee dislocations are serious injuries usually occurring in the context of high-energy trauma (dashboard syndrome) due to significant vascular-neural risks.
The technique of olecranization of the patella in the lesion of the PCL is one of the techniques of choice

II. Case Report :

This is a 20-year-old patient with no notable pathological history who was received in the emergency room of hassan 2 university hospital center in Fes for pain and total functional impotence of the left lower limb following a road accident (car collision).

Figure 1

On admission, the patient was conscious; hemodynamically and respiratory stable with vicious posture of the left knee in extension without vasculonervous lesion.
Standard radiographs of the knee and pelvis were requested, demonstrating a pure posterior dislocation of the left knee (figure 2).

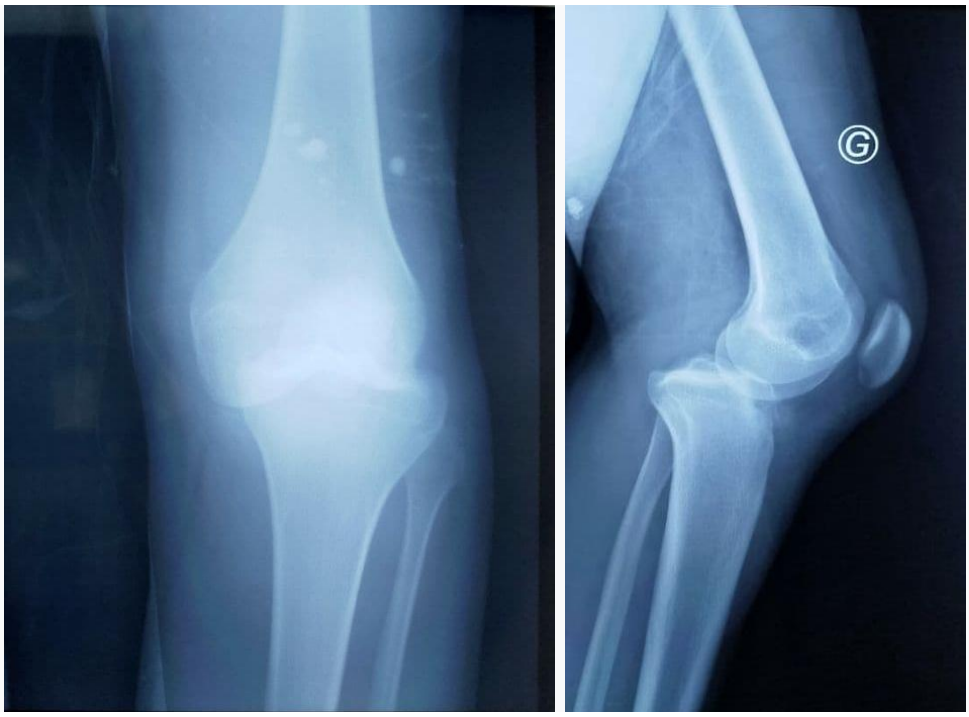

Figure 2

An opinion of vascular surgeons was sought: distal pulses perceived and they recommended a postoperative CT angiography.
The patient was taken to the operating room under spinal anesthesia in the dorsal decubitus position, reduction of the closed-hearth dislocation (traction in the axis of the limb, knee flexed at 90 ° with posterior pressure on the leg)
Post reduction testing revealed a posterior drawer without front drawer or lateral laxity with good mobility of the knee in flexion extension, then we proceeded to olecranization of the patella (figure 4).

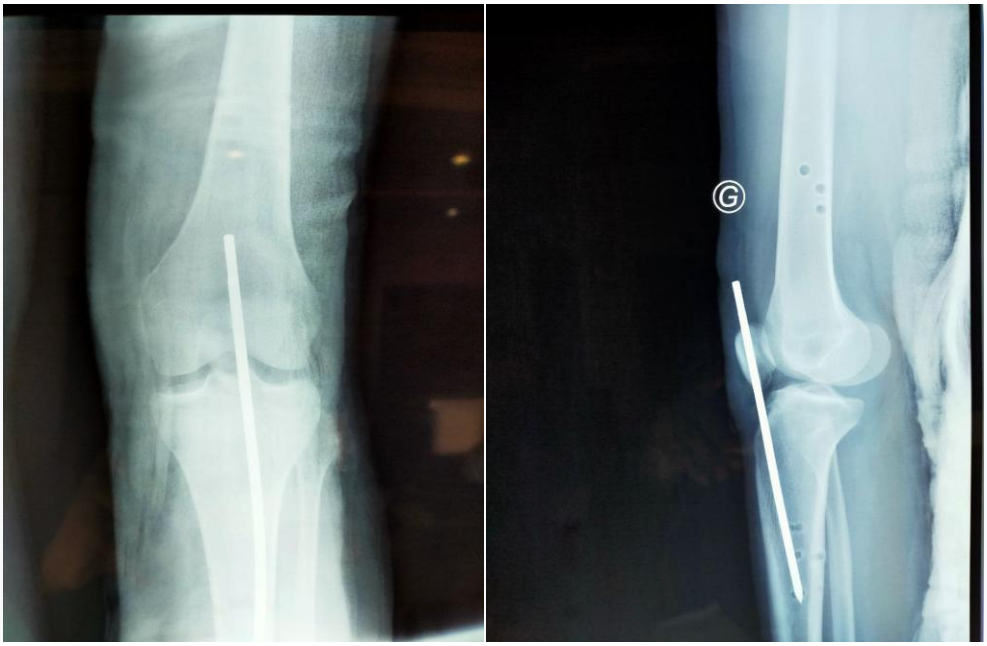

Figure 3

The postoperative vascular examination was unremarkable A postoperative CT angiogram was performed and returned without abnormality.
Follow-up radiographs demonstrated good joint congruence (Figure 3).
Passive rehabilitation was started immediately with the progressive authorization of walking without assistance.
The Steinmann nail was removed at the end of the 6 th week with good functional recovery and the absence of a drawer after clinical examination of the knee.

III. Discussion :

Knee dislocation is a rare but serious injury due to the vascular risk.
In the literature, several cases have been reported, in particular posterior dislocation (the most frequent variety), the mechanism of which is most often a violent impact on the anterior tibial tuberosity, knee flexed at 90 °.
ACL is often affected at the same time as PCL, but it can sometimes be respected (Shield26).
This injury can be the result of a high energy, high velocity crash.
High velocity trauma is the cause of many vascular complications (12 to 65% of cases)
It seems preferable to us to offer a CT angiogram, which is easily accessible in emergency and does not present the risk of local complications of the arteriography.
Nerve complications are common (9% to 18%)
The popliteal artery lesion is present in 44% of cases (Grean11).
Stabilization of the knee after rupture of the PCL by olecranisation of the patella constitutes a sufficiently rigid assembly to maintain the reduction of the posterior drawer while allowing rapid mobilization of the knee.
This technique allows proper healing of ligament formations without surgical repair of the PCL with good functional results.

IV. Conclusion

The olecranization of the patella significantly reduces the posterior drawer in PCL injured knees when the Steinmann's nail is inserted with the knee flexed 70 °. This technique, which helps maintain postoperative joint mobility, could help optimize PCL healing under conservative treatment.

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