

Traumatic Neglected Antero-Medial Knee Dislocation: Case Report

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Abstract

Introduction: Neglected knee dislocation is an unusual injury, only a few cases have been reported in the literature. The circumstances of onset are generally an unnoticed knee dislocation in a polytrauma context or a delay in consultation after the initial trauma. **Presentation of case:** We report the case of a 48-year-old female patient who sustained a knee injury during a domestic accident. Initial treatment was traditional and was followed for 3 years. She then consulted hospital, where a neglected knee dislocation was identified and treated with femorotibial arthrodesis. **Discussion and conclusion:** The treatment options of neglected knee dislocation include open reduction and fixation, arthrodesis and total knee arthroplasty. That the choice depends on the old unreduced of dislocation.

Keywords

Neglected Knee Dislocation, Tibiofemoral Arthrodesis, Total Knee Arthroplasty

1. Introduction

Traumatic knee dislocation is an unusual and severe injury. The neurovascular complications, which are the main concerns, make the management of the traumatic knee dislocation as a therapeutic emergency. The incidence of these neurovascular complications is estimated at 20% [1]. Neglected knee dislocation is very unusual and only a few cases have been reported in the literature [2] [3]. It is only seen in special circumstances. In sub-Saharan Africa, where traditional treatment

is often the first recourse for patients after a trauma, a dislocated knee can go unnoticed. In fact, since traditional treatment is carried out without prior radiography, the dislocation may go unrecognized and be treated without reduction, resulting in a neglected dislocation. Treatment options of neglected knee dislocation are not clearly described [3]. These treatment options include open reduction and fixation, arthrodesis and total knee arthroplasty. The choice depends on the old unreduced of dislocation. The authors report a case of three years old neglected knee dislocation. This case report has been reported in line with the SCARE 2023 criteria [4].

2. Case Report

A 48-year-old woman presented to the Orthopedic consultation with complaints of the absolute functional impotence of the left pelvic limb and a major instability of his ipsilateral knee. She moved by using a pair of crutches without the support on the left pelvic limb. The questioning of the patient reveals a knee trauma that occurred 3 years ago. She accidentally fell from her height at home. Following the trauma, she started a traditional treatment. The treatment she received consisted of massages and the application of poultices. The treatment has been followed for 3 years without satisfactory results. On clinical examination, we found an antero-posterior widening of the knee and a shortening of 7 cm (**Figure 1**). The distal neurovascular status, however, was normal. A Significant frontal laxity was noted. The Knee flexion was 35 degrees and full extension was possible. Radiographs of the knee joint in the antero-posterior and lateral views revealed an anteromedial dislocation of the knee (**Figure 2**). The CT angiography of the limb showed a good arterial flow on all vascular axes (**Figure 3**). The knee joint was opened through a medial para-patellar approach. After arthrotomy, the fibrous adhesions around the knee joint were released, and an AO-type distractor was placed on the femur and tibia to gradually reduce the joint (**Figure 4**). During this reduction maneuver, the tibial pulse was simultaneously palpated, and when a decrease in pulse intensity was noted, the distraction was stopped and the bone cuts were made. After the femoral cut, the femoral condyles were left in the popliteal fossa to protect the artery. A femorotibial arthrodesis was performed using tibiofemoral cross screw fixation combined with femorotibial exofixation using an Orthofix fixator (**Figure 5**). The immediate post-operative course was straightforward. Healing of the surgical wound was achieved in 21 days. Fusion of the arthrodesis was achieved in 3 months, and the external fixator was removed within the same timeframe (**Figure 6**). A residual shortening of 3 cm remained, which was compensated for by wearing a shoe with a raised sole. At 9 months follow-up, walking was possible without assistance, and the knee was painless.

3. Discussion

Neglected dislocation of the knee is a rare injury, the occurrence of which is inconceivable in the hospital setting. The reasons for the occurrence of inveterate



Figure 1. Clinical image showing limb shortening and knee stiffness.

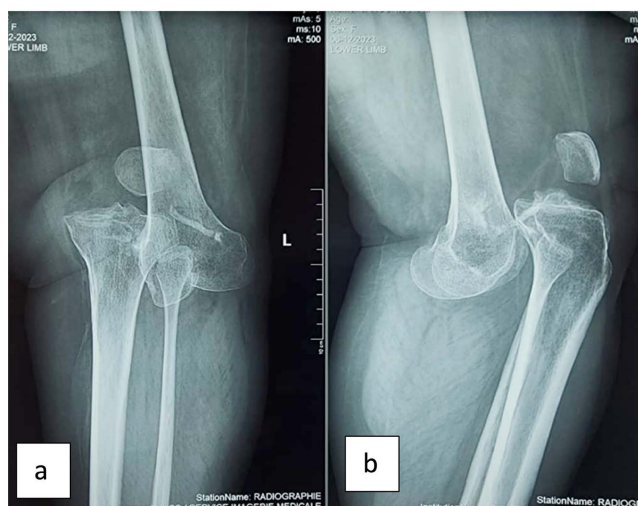


Figure 2. Radiographs of knee joint in antero-posterior (a) and lateral (b) views showing antero-medial dislocation of knee joint.



Figure 3. CT angiogram showing continuity of the arterial axis, the popliteal artery being bent in the intercondylar notch.



Figure 4. AO-type distractor in place for progressive distraction.

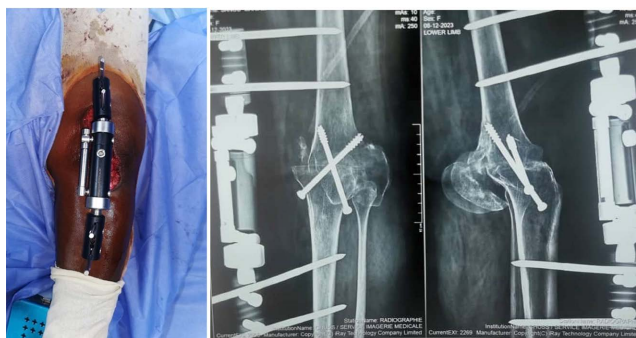


Figure 5. Arthrodesis with cross screwing, results immediately post-operative.

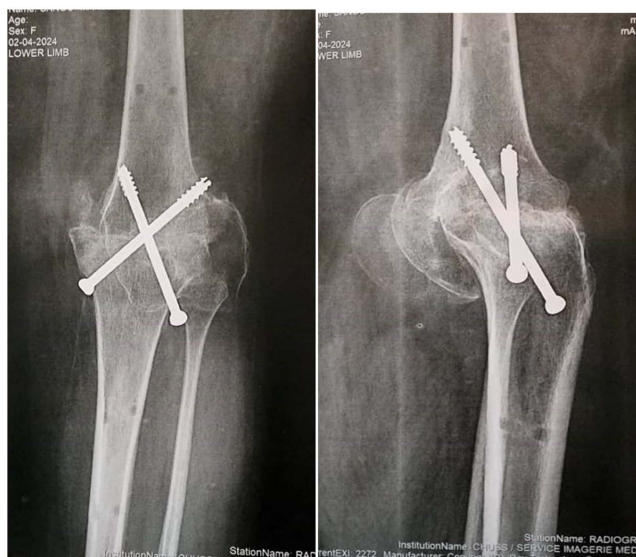


Figure 6. Fusion of the arthrodesis, results at 6 months post-operative.

dislocation are often the inadequacy of the initial clinical examination, especially in the presence of other lesions masking the dislocation [5]. The neglected knee dislocation in our case is due to the traditional treatment of the initial lesion. In our context, traditional treatment is generally carried out without prior radiography. Treatment of recent knee dislocation is well codified, consisting of emergency reduction followed by staged repair of ligamentous damage [6] [7]. There is no consensus on the treatment of neglected knee dislocation. Treatment options include conservative therapy as opposed to arthrodesis and total knee arthroplasty.

The results of conservative treatment are disappointing. Kapil *et al.* [3] reported a case of inveterate dislocation lasting one month, treated by bloody reduction followed by functional rehabilitation. At one year's follow-up, this patient's knee flexion was limited to 50 degrees, with gonalgia on walking. Given this unsatisfactory result, arthrodesis or PTG were the options proposed to this patient. Hatim *et al.* [5], who also reported on a 2-year-old inveterate dislocation treated conservatively, found a knee with 30 degrees of flexion at 6 months' follow-up. Vicente-Guillen [1] reported on a 15-year-old posterior knee dislocation treated by reduction arthrodesis. This treatment was also adopted by Matthai *et al.* [6], decided intraoperatively when reduction proved impossible due to soft-tissue retraction and extensive cartilage damage. Arthroplasty and arthrodesis are the two means of treating neglected knee dislocation that appear to give the best results [5] [8] [9]. Arthroplasty should be reserved for "recent" neglected dislocations without significant damage to the knee's means of stability and for young patients with significant functional needs. In our patient, a housewife of limited financial means, who had a neglected knee dislocation for 3 years, and in our context of limited technical means, a nonconservative by arthrodesis treatment was performed. The choice of arthrodesis is explained in this context by the unavailability of arthroplasty implants. It therefore remains a default indication that gives satisfactory results. In certain situations, notably in the case of very old invasive dislocations. Intraoperatively, after the excision of the fibrosis, the progressive reduction was performed using an AO distractor placed on the femur and tibia. During the distraction, the tibial pulse was palpated, and its intensity was assessed. Pulse intensity decreased with distraction, indicating tension on the popliteal artery. Distraction was stopped at this point. The femur was cut at this point without attempting to completely extract the femoral condyles. After cutting, the femur was translated forward to face the tibia, leaving the condyles behind.

4. Conclusion

Neglected knee dislocation is a rare condition. In our African context, it is due to the traditional treatment of the initial lesion. The results of conservative treatment are not satisfactory. Arthrodesis is a good therapeutic option. The results obtained are satisfactory.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- [1] Vicente-Guillen, P., Figa-Mataró, J. and Coloma-Bellver, J. (1998) Long-Standing Unreduced Dislocation of the Knee. *International Orthopaedics*, **22**, 275-276.
<https://doi.org/10.1007/s002640050259>
- [2] Leonardi, F., Zorzan, A., Palermo, A. and Molfetta, L. (2017) Neglected Posterior Knee Dislocation: An Unusual Case Report. *Joints*, **5**, 253-255.
<https://doi.org/10.1055/s-0037-1607219>

- [3] KC, K.M., Dirgha Raj, R., Parimal, A. and Bandhu Ram, P. (2016) Open Reduction of Neglected Knee Dislocation: Case Report of a Rare Injury. *Malaysian Orthopaedic Journal*, **10**, 56-57. <https://doi.org/10.5704/moj.1611.011>
- [4] Sohrabi, C., Mathew, G., Maria, N., Kerwan, A., Franchi, T. and Agha, R.A. (2023) The SCARE 2023 Guideline: Updating Consensus Surgical Case Report (SCARE) Guidelines. *International Journal of Surgery*, **109**, 1136-1140. <https://doi.org/10.1097/js9.0000000000000373>
- [5] Garnaoui, H., Trafteh, M.a., El Kassimi, C., Rafaoui, A., Rahmi, M. and Garch, A. (2022) Two Years Neglected Knee Dislocation: An Unusual Case Report. *International Journal of Surgery Case Reports*, **90**, 106745. <https://doi.org/10.1016/j.ijscr.2021.106745>
- [6] Matthai, T., Bhowmick, K., Boopalan, P.R.J.V.C. and George, J.C. (2015) Neglected Anterior Dislocation of the Knee with Common Peroneal Palsy. *Case Reports in Orthopedics*, **2015**, Article ID: 174965. <https://doi.org/10.1155/2015/174965>
- [7] Owens, B.D., Neault, M., Benson, E. and Busconi, B.D. (2007) Primary Repair of Knee Dislocations: Results in 25 Patients (28 Knees) at a Mean Follow-Up of Four Years. *Journal of Orthopaedic Trauma*, **21**, 92-96. <https://doi.org/10.1097/bot.0b013e3180321318>
- [8] Petrie, R.S., Trousdale, R.T. and Cabanela, M.E. (2000) Total Knee Arthroplasty for Chronic Posterior Knee Dislocation. *The Journal of Arthroplasty*, **15**, 380-386. [https://doi.org/10.1016/s0883-5403\(00\)90854-4](https://doi.org/10.1016/s0883-5403(00)90854-4)
- [9] Frassica, F.J., Sim, F.H., Staeheli, J.W. and Pairolo, P.C. (1991) Dislocation of the Knee. *Clinical Orthopaedics and Related Research*, **263**, 200-205. <https://doi.org/10.1097/00003086-199102000-00024>