CASE REPORT

Unusual Combination of Posterior Femoral Head Dislocation and Ipsilateral Intertrochanteric Open Fracture: Case Report

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Abstract

The combination of posterior femoral head dislocation with ipsilateral intertrochanteric fracture is an extremely rare occurrence, therefore, few reports exist. In this paper, we describe a particular case of a middle-aged patient who sustained a high energy trauma which led amongst other to this lesion. We performed the reduction and fixation of the fracture-dislocation on a traction table with a Dynamic Hip Screw-plate (DHS-plate). Primary objectives of the treatment were to obtain a stable limb, to reduce blood loss in a polytraumatized patient and allow early mobilization. Follow-up after three months was good.

Keywords: femoral head dislocation, intertrochanteric fracture, high energy trauma, dynamic hip screw plate

Rezumat

Asocierea dintre luxația capului femoral și fractura ipsilaterală pertrohanteriană este extrem de rară, fiind raportate doar câteva lucrări pe această temă. În această prezentare descriem cazul unui pacient care a suferit un traumatism de energie înaltă și care s-a soldat cu acest tip de leziune. Intervenția chirurgicală s-a desfășurat utilizând masa operatorie de tracțiune, folosind un implant pentru fixare de tip DHS. Obiectivele principale ale intervenției chirurgicale au fost de a reduce sângerarea asociată fracturii la un pacient politraumatizat, refacerea stabilității membrului cu scopul de a-și relua precoce mobilitatea. După trei luni de la intervenția chirurgicală, evoluția pacientului a fost bună.

Cuvinte cheie: luxația capului femural, fractura pertrohanteriană, traumatism de energie înaltă

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INTRODUCTION

The combination of posterior femoral head dislocation with ipsilateral intertrochanteric fracture is an extremely rare occurrence, therefore, few reports exist. The posterior femoral head dislocation is an injury most common encountered in road traffic accident (dashboard) and may associate various types of acetabular, femoral head or femoral neck fractures[1-3] but almost never an intertrochanteric fracture. The intertrochanteric fracture in young people is also the result of a high energy trauma unlike in elderly patients, for whom this type of fracture occurs in ninety percent from a simple fall[2]. Operative management, which allows early rehabilitation and offers the patient the best chance for functional recovery, is the treatment of choice for the vast majority of intertrochanteric fractures[4,5]. The implant choice may vary depending on the fracture severity (stable or unstable according to Evans classification), the implant availability and the surgeons prefered technique[2,4,6,7]. We chose a DHS-plate fixation of the fracture. The main goal was to obtain a stable limb in order to allow early mobilization and to reduce blood loss in a polytraumatized patient.

CASE REPORT

A 49-year-old patient presented at our emergency department after he was hit by tram. The patient was rushed to the hospital and upon presentation the state of consciousness was unaltered. He stated that he cannot feel his left leg and further examination revealed a pathological position of the inferior limb, a small puncture wound on the posteroinferior aspect of the buttock, respiratory difficulty and pain in the left hand. The patient underwent plain X-rays and a full body computed tomography scan (CT-scan) that revealed posterior femoral head dislocation (Figure 1-3) with ipsilateral intertrochanteric open fracture, flail chest, fracture of the fourth and fifth left metacarpals. We admitted him for surgery and we proceeded to reduce the dislocated femoral head on a traction table and afterwards reduce fracture and fix it with a DHS–plate type implant. Post-op X-rays were showing good reduction and stable fixation. Due to the flail chest and subsequent lung concussion the patient was transferred to the Intensive Care Unit (ICU). During his stay in the ICU, he developed an infection with Accinetobacter spp. This resulted in a difficult mobilization which led to an abnormal position of the lower limb. During his stay in our hospital the nervous status of the lower limb was gradually improving, and by the time of discharge it had gained full sensory and motor function above the knee on the inflicted limb. At the one month

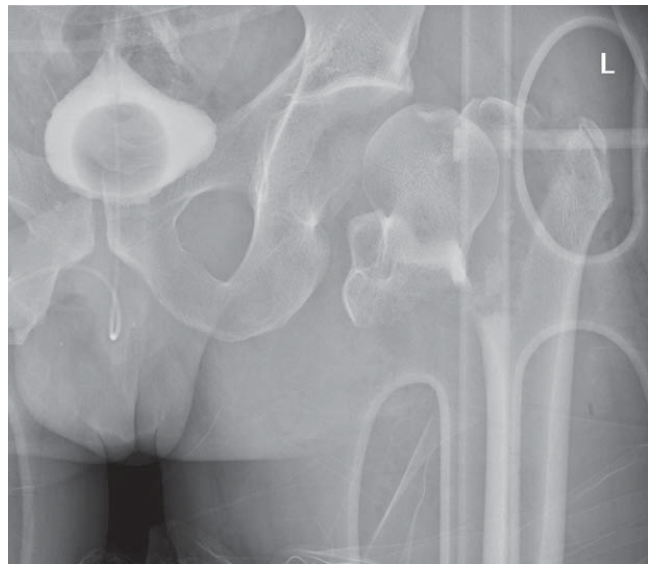

Figure 1.

Figure 2.

Figure 3.

check-up no progress on the mobilization of the hip was shown – at this time it was fixed in external rotation with limited flexion and some degrees of extension. The check-up X-rays were inconclusive and it has been stated that this appearance may be the result of implant failure (Figure 4). We decided to admit the patient and to proceed with surgery in order to obtain better reduction and better internal fixation. Upon positioning on the traction table we observed that the previous X-rays were faulty so after the anesthesia we switched our plan to mobilization. We obtained and excellent result (Figure 5-6) only with the plain mobilization of the limb, the patient being later discharged with fully rotational movement at the hip level. The three months follow-up was good, the patient maintained the range of motion previously gained, but still with a small degree deficit on sensory and motor function of the left foot.

DISCUSSION

Due to the fact that the combination of posterior femoral head dislocation with ipsilateral intertrochanteric fracture is an extremely rare occurrence and few reports exist, the right approach for this lesion is debatable. We opted for reduction on a traction table, lateral approach and a DHS-plate fixation. In the process of pre-operatory planning we also considered prone position and posterior Kocher-Langenbeck aproach that in our case would have presented some advantages such as a better visualisation of the displaced femoral head and direct visualization of the sciatic nerve[8,9]. The down-fall of this aproach would be that the fixation would have been troublesome; furthermore, the flail chest prevented the prone position. For fixation of the fracture we could have gone for the centromedulary implant. In this way, the periosteum would have been preserved[10-13]. Apart from this two methods, there are cases where a good fixation of the fracture site is difficult to achieve[10-13], so the best option for the patient is a prosthetic replacement, aspect that should be considered with the patient

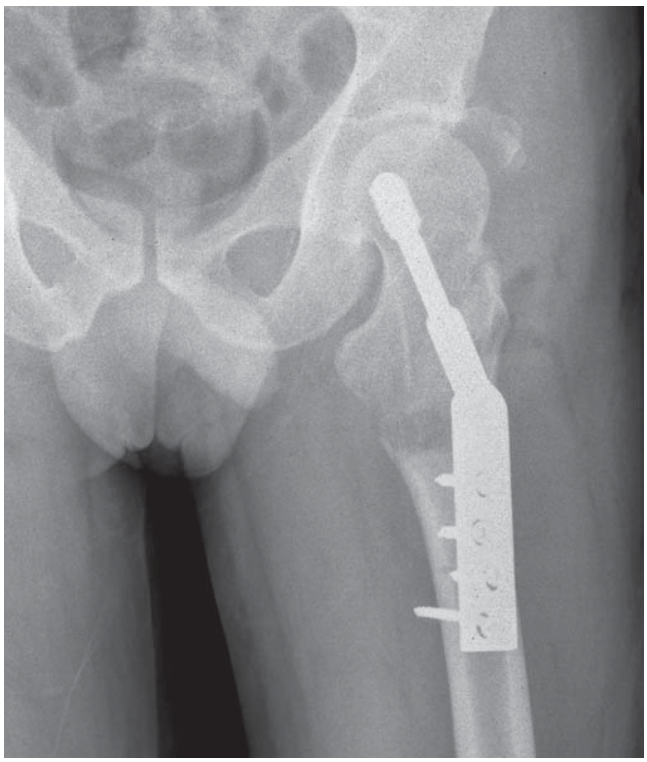

Figure 4.

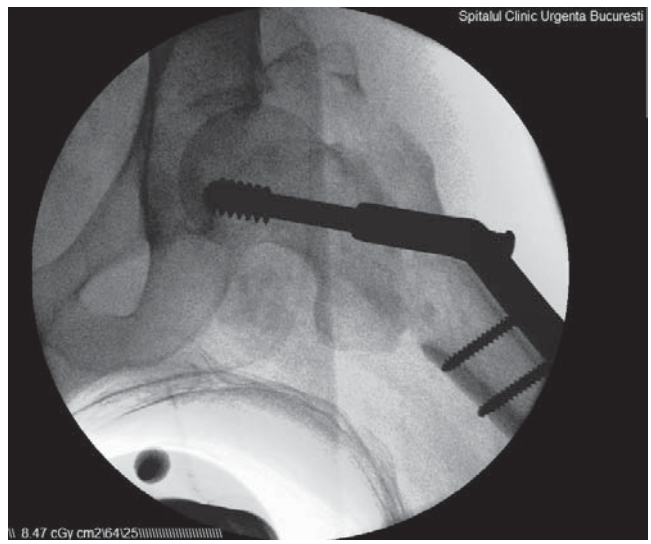

Figure 5.

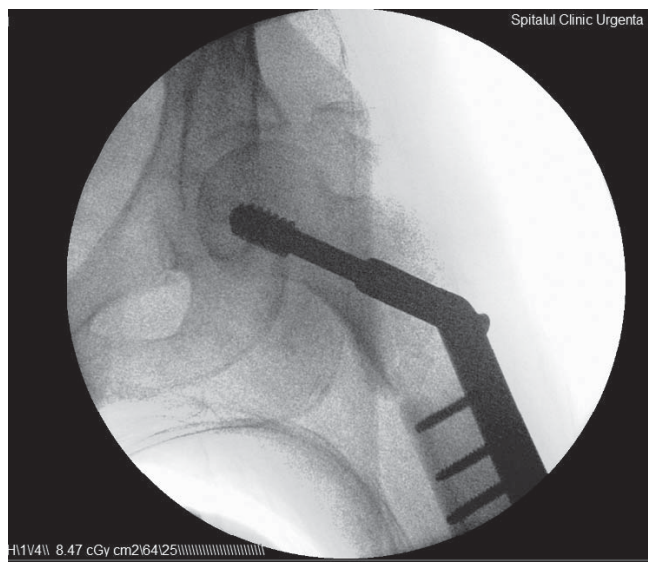

Figure 6.

before entering surgery[4]. The mobilization during the pacient's stay could have improved the short term outcome and it might have spared him from the second anesthesia, but the associated injuries prevented the reabilitation program. The patient should be followed up at least two years.

CONCLUSION

Due to high energy trauma in which this type of lession may occur, the surgical management is complex and it must be individualized to every patient acording to the associated lessions to ensure the lowering of the specific mortality and morbidity. We apreciate that the right aproach for this case in order to reduce hospitalization time, have a better functional and vital outcome and for the socio-economical reinsertion of the patient is to perform emergency surgery on the traction table and fixation with DHS-plate or centromedulary implant.

Compliance with ethics requirements:
The authors declare no conflict of interest regarding this article.

The authors declare that all the procedures and experiments of this study respect the ethical standards in the Helsinki Declaration of 1975, as revised in 2008(5), as well as the national law. Informed consent was obtained from all the patients included in the study.

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