E-ISSN: 2707-8353
P-ISSN: 2707-8345
IJCRO 2022; 4(2): 29-32
Received: 13-05-2022
Accepted: 18-06-2022

Goukodadja O
Department of Surgery and Surgical Specialities, Faculty of Health Sciences, University of Abomey-Calavi, Republic of Benin, Benin

Chigblo P
Department of Surgery and Surgical Specialities, Faculty of Health Sciences, University of Abomey-Calavi, Republic of Benin, Benin

Salia O
Department of Surgery and Surgical Specialities, Faculty of Health Sciences, University of Abomey-Calavi, Republic of Benin, Benin

Padonou A
Department of Surgery and Surgical Specialities, Faculty of Health Sciences, University of Abomey-Calavi, Republic of Benin, Benin

Manga E
Department of Surgery and Surgical Specialities, Faculty of Health Sciences, University of Abomey-Calavi, Republic of Benin, Benin

Baraka E
Department of Surgery and Surgical Specialities, Faculty of Health Sciences, University of Abomey-Calavi, Republic of Benin, Benin

Madougou S
Department of Surgery and Surgical Specialities, Faculty of Health Sciences, University of Abomey-Calavi, Republic of Benin, Benin

Hans-Moevi A
Department of Surgery and Surgical Specialities, Faculty of Health Sciences, University of Abomey-Calavi, Republic of Benin, Benin

Corresponding Author:
Goukodadja O
Department of Surgery and Surgical Specialities, Faculty of Health Sciences, University of Abomey-Calavi, Republic of Benin, Benin

Obturator dislocation of the hip in adults: Two cases

Goukodadja O, Chigblo P, Salia O, Padonou A, Manga E, Baraka E, Madougou S and Hans-Moevi A

DOI: https://doi.org/10.22271/27078345.2022.v4.i2a.121

Abstract
Obturator hip dislocation is a rare variety of hip dislocation in which the femoral head is in front of the obturator foramen. It is caused by a violent accident. Obturator hip dislocation is rarely isolated. It is often associated with acetabular, femoral head or femoral neck fracture. The most feared complication is the femoral head necrosis. That is why an urgent reduction is required. We report two cases of Obturator hip dislocation. The first one is associated with a great trochanter fracture in a 48 years old patient. The second one is an isolated Obturator hip dislocation without any lesion of acetabulum or femoral head or trochanteric mass. In emergency, both had an urgent reduction of the dislocation with general anaesthesia, then transcondylar traction was made. In the first case, the great trochanter fracture has been synthesized by screwed hook plate. The two patient resumed work after three months. At the last review, there was no sign of femoral head necrosis.

Keywords: Obturator dislocation, hip, adult, reduction

Introduction
Traumatic hip dislocation is defined as a permanent movement of the femoral head out of the acetabular cavity after a violent trauma [1]. The obturator variety is characterised by the head's positioning in front of the obturator foramen [2].
It is a functional emergency because the long-term prognosis will depend on the reduction period. This is a very rare variety, hence the interest of this case report. We report here, two cases of an Obturator hip dislocation. The first one is associated with a fracture of the great trochanter in a 48 years old patient. The second one is an isolated Obturator hip dislocation in a 40 years old patient.

Observation
Case 1
The patient is a 48 years old driver who was fully autonomous before a highway accident with a bus. The patient was not belted in his vehicle. A bus travelling in the same direction crashed into his car on the right side, propelling it out of the road into an electric pole. He had a closed trauma on his left hip causing an absolute functional impotence.
The first examination showed a vicious attitude of the left hip in flexion, abduction and external rotation (Picture 1). Pelvis X-rays (Picture 2A and 2B) revealed an Obturator hip dislocation associated with a fracture of the great trochanter.
The patient was anaesthetized with curarization. An urgent reduction was done by external manoeuvre as follows : first traction in the axis of the limb allowing a decoaptation of the femoral head, then the limb was gradually brought to adduction, flexion and internal rotation. The reduction testing was satisfactory and trans-condylar traction of femur was conducted. The control X-ray and CT scan confirmed the reduction and the fracture of the great trochanter but there was no acetabulum lesion, nor any lesion of femoral head or femoral neck.
After fifteen days, an osteosynthesis was done with screwed hook plate. At 21 days of evolution, the wound had healed and the traction was removed. The patient was verticalized and he started walking with crutches without pressing on the left limb. Physiotherapy sessions had continued till the consolidation of the fracture at three months (Pictures 3A and 3B). Then, he went back to his job.
Reviewed at one year, the patient had no complaints. Walking and driving over long periods were easy and painless. The testing of the left hip did not cause any pain and there was no lameness or shortening of the limb.

Mobilities and muscular strength were symmetrical compared to the controlateral hip. The X-Ray showed no sign of femoral head necrosis.

Case 2

A 40 years old male patient, a manual worker with no specific history, was admitted four (04) days after a motorcycle fall. Actually, the patient, driving a bike, lost control of the vehicle while avoiding an obstacle. He fell down on his left knee causing a closed trauma of the hip leading to a pain and complete functional impotence.

The initial examination found a vicious and irreducible attitude of the left hip in flexion, abduction, external rotation. There was a swelling and pain in the groin fold but no vasculo-nervous disorders of extremities. The standard pelvis X-rays showed an Obturator hip dislocation.

An urgent reduction with general anaesthesia was performed as described in Case 1. The testing of the reduction was satisfactory and a trans-condylar traction of femur was done. The control X-ray and CT scan (Picture 4) confirmed the reduction and absence of acetabulum lesion, head or femoral lesion.

The traction was removed after six (06) weeks and then functional rehabilitation began. The patient was verticalized and allowed to walk with crutches without pressing on his left limb. The patient resumed his job after three months.

Reviewed six (06) months later, the clinical exam was normal. There was no pain. Mobilities and muscular strength were symmetrical.

Discussion

Traumatic hip dislocation is usually associated with acetabular fracture and/or fracture of the femoral head. These injuries are consecutive to high energy trauma in the context of polytrauma as reported by several authors [2–5].

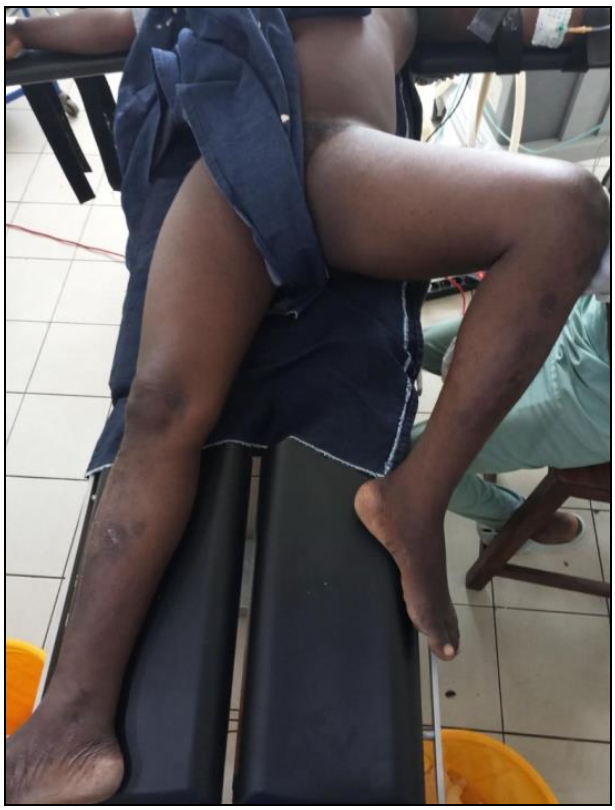
The obturator variety represents 6-10% of cases [1]. It may be pure [4] or associated with joint lesions. Mayur *et al*. reported a fracture of the anterior acetabular column and the posterior acetabulum wall [3]. An associated fracture of the femoral neck, the trochanteric mass and the ipsilateral femoral diaphysis has been reported by several authors [3, 4, 6, 7]. One of the two cases we reported, presented a fracture of the great trochanter. There is a cam effect of the great trochanter on the ischium carrying the femoral head out of the acetabulum. It can be the origin of the great trochanter fracture.

Cases of open Obturator hip dislocation are uncommon. Akhil *et al*. reported an open case of Obturator hip dislocation with a wound in the inguinal region exposing the femoral head [8]. No skin opening was noted in our two (02) patients.

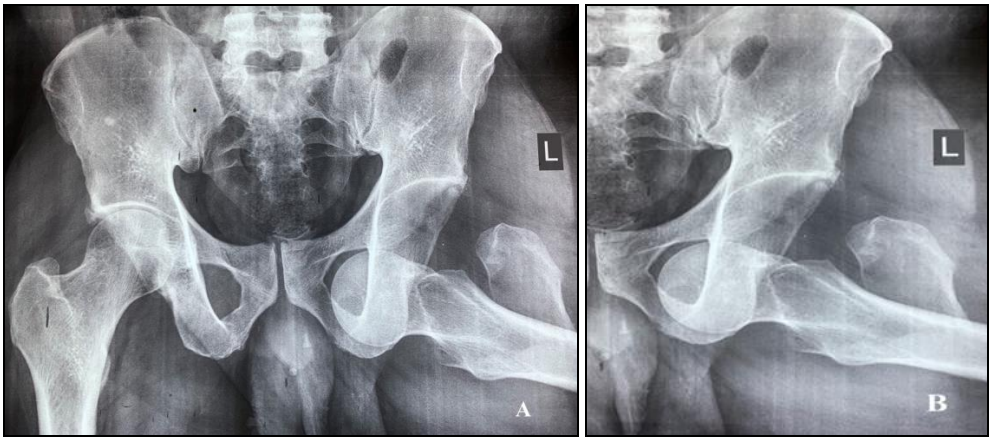
Orthopaedic reduction is urgently needed [1-5]. According to Dellanh *et al*. The initial management involves an orthopedic reduction with general anaesthesia and complete muscle relaxation [1]. But, there is a risk of iatrogenic fractures of the femoral neck and this was reported by Boyer *et al*. [9]. Reduction maneuvers are much discussed. Epstein *et al*. And Brav *et al*. recommend traction in the femur axis followed by progressive hip flexion, internal rotation and abduction [10]. Toms *et al*. criticized abduction because the hip is already in forced abduction [2]. They also condemned the forced internal rotation which would explain the fracture of the femoral neck. They recommend using orthopaedic table, associating lateral traction of the thigh, and then, gradually release the traction while making an internal rotation and adduction [2]. In our first case, the traction of the femoral axis allowed decoaptation of the femoral head, then, the limb was gradually brought to adduction and internal rotation. We think this technic was the most appropriate because of the fracture of the great trochanter.

Post-reduction CT scan should always look for frequently associated osteochondral fractures of femoral head [3, 5, 10]. In our cases, after reduction, CT scan helped us to eliminate the associated lesions of femoral head and acetabulum in the second case. It also facilitated a better analysis of the great trochanter fracture in the first case and a good preoperative planning.

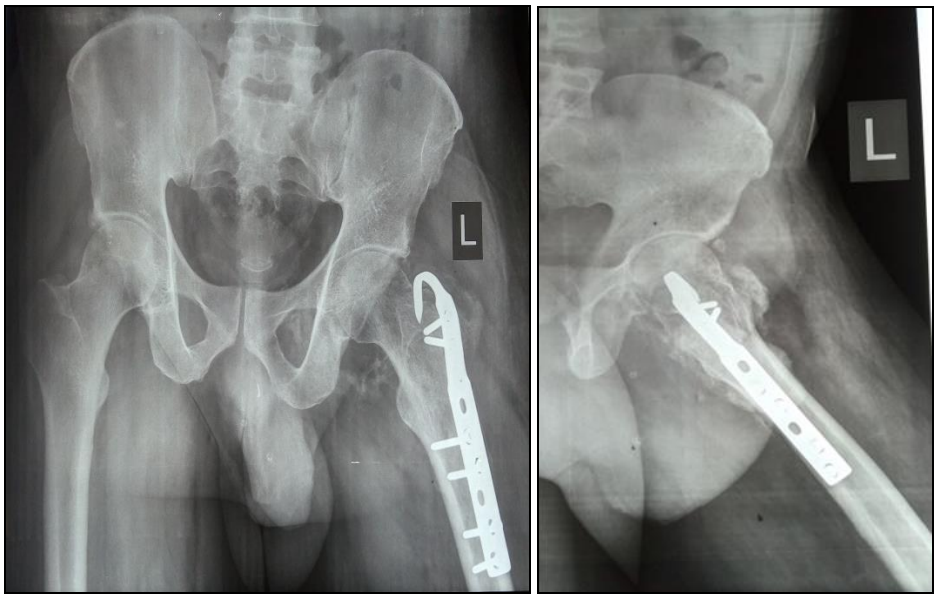
Cephalic necrosis is one of the most feared complications after any hip dislocation. Farag *et al*. reported in their study a necrosis stage II of the femoral head after one year in a patient initially presenting an Obturator hip dislocation associated with a tear fracture of trochanteric mass and diaphyseal fracture of the homolateral femur. The surgical treatment consisted in a double screwing of the great trochanter and a screwed plate of the ipsilateral femoral shaft [6]. In the case of our patient with a fracture of the great trochanter, at one year, there was no particular symptom and no sign of femoral head necrosis on the pelvis X-rays. But this result does not exclude the possibility of a subsequent cephalic necrosis.



Picture 1: Vicious attitude in obturator hip dislocation : abduction, flexion and external rotation.

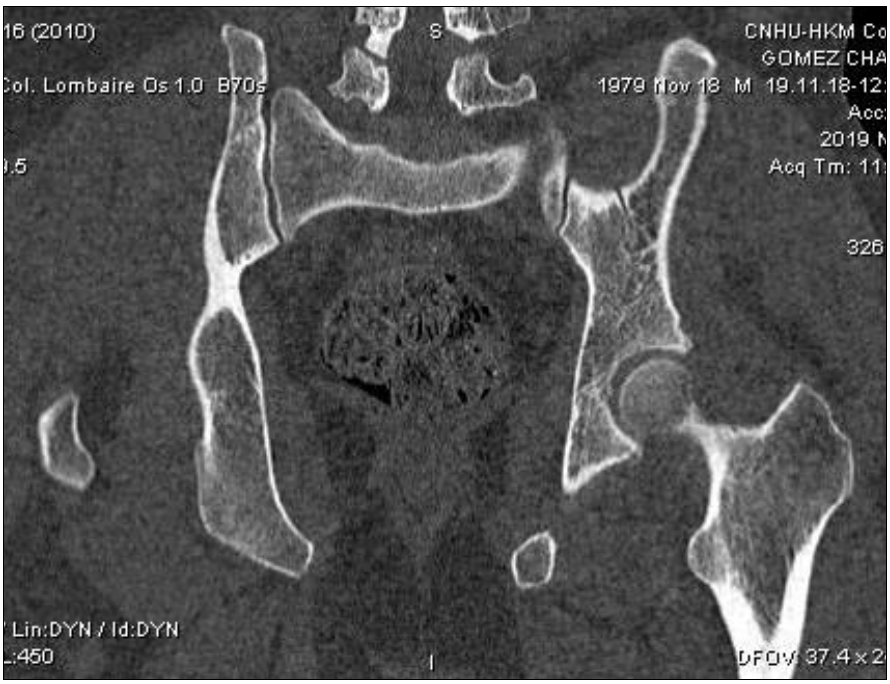


Picture 2: Standard X-rays (2A = front et 2B= profil): Obturator hip dislocation associated with great trochanter fracture.



A B

Picture 3: Pelvis X-rays (3A front and 3B profil) : consolidated fracture of great trochanter after osteosynthesis with screwed hook plate.



Picture 4: CT scan of pelvis : absence of associated lesion of acetabulum, femoral head or femoral neck.

Conclusion

Obturator hip dislocation is a rare variety of regular hip dislocations. Whatever the associated lesion, orthopaedic reduction must be done urgently to prevent cephalic necrosis.

Références

1. Dellanh YY, *et al*. Luxation obturatrice de la hanche : à propos d'un cas. Pan African Med J. 2015;22(1):195.
2. Toms AD, Williams S, White SH. Obturator hip dislocation. J Bone Joint Surg (Br). 2001;83(1):113-115.
3. Nayak M, Yadav R, Sahu B K, *et al*. An Unusual Presentation of Pubic-type Anterior Hip Dislocation with Concomitant Anterior and Posterior Acetabular Wall Fracture; c2019, 11(4). Cureus: e4390. DOI:10.7759/cureus.4390
4. Elouakili I, Ouchrif Y, Ouakrim R, Lamrani O, Kharmaz M, Ismael F, *et al*. Luxation obturatrice de la hanche : un traumatisme rare en pratique sportive. Pan African Med J. 2014;18:138.
5. Traoré A, Soumaro DK, Mobiot-Aka C, Mbende AS, Boka RE, Dosso M, *et al*. Obturator hip dislocation at Yopougon/Abidjan Teaching Hospital. Open Journal of Orthopedics. 2015;5(10):319-25.
6. Farag AW, Shohayeb KA. Intrapelvic dislocation of the head of femur through the obturator foramen associated with ipsilateral fracture femur. J Bone Joint Surg (Br). 2003;85(7):1056-1058.
7. Domingo A, Segur JM, Suso S. Anterior dislocation of the hip associated with an actebular fracture: case report. Eur J Trauma Emerg Surg Off PublEur Trauma Soc. 2008;34(1):88-90.
8. Akhil A, Vishal D, Arvin B, Subaraman R. A rare case of open anterior hip dislocation. 2013;1(3). Doi:10.1093/jscr/rjs035.
9. Boyer P, Bassaine M, Huten D. La luxation obturatrice traumatique chez l'adulte : à propos d'un cas et revue de la littérature. Revue de chirurgie orthopédique. 2004;90(7):673-677.
10. Epstein HC, Wiss DA. Traumatic anterior dislocation of the hip. Orthopedics. 1985;8(1):130-132-134.