ABSTRACT

Compressive haematoma is one of the rare and severe causes of sciatic nerve palsy after prosthetic hip surgery. The purpose of the clinical case is to account for the need for clinical sensitization in the early postoperative period, for early management and improvement of functional prognosis.

We report the case of a young woman, an Arab Moroccan of 32 years old, operated for a congenital dislocation of her right hip with a total hip prosthesis complicated by a total paralysis of the sciatic nerve three days after the surgical act. The diagnosis of a compressive haematoma of the sciatic nerve, suspected clinically before an abnormal increase in the volume of the thigh, was confirmed by tomodensitometry. The surgical drainage allowed a clinical relief without loss of the deficit signs confirmed by the electrophysiological explorations. After one year of surgery, the patient has a complete recovery of the posterior tibial nerve, and partial recovery of the fibular nerve.

The paralysis of the sciatic nerve following the placement of a total hip prosthesis is a serious complication and not unknown in literature. The compressive haematoma is one of its rare causes, its late appearance seems exceptional. Rapid diagnosis followed by urgent surgical drainage does not always allow recovery of neurological lesions that may be irreversible.

Keywords: Compressive haematoma, Paralysis, Sciatic nerve, Surgery, prosthetic hip.

RESUME

L’hématome compressif est l’une des causes rares et graves de la paralysie du nerf sciatique après une chirurgie prothétique de la hanche. Le but du cas clinique est de rendre compte de la fréquence de cette complication et la nécessité d’une sensibilisation clinique dans la période postopératoire tôt, pour
prise en charge précoce et amélioration du pronostic fonctionnel.

Nous rapportons le cas d’une jeune femme de 32 ans, opérée pour une luxation congénitale de sa hanche droite avec mise en place d’une prothèse totale de hanche compliquée d’une paralysie totale du nerf sciatique trois jours après le geste opératoire. Le diagnostic d’un hématome compressif du nerf sciatique, suspecté cliniquement devant une augmentation anormale du volume de la cuisse, était confirmé par la tomodensitométrie. Le drainage chirurgical avait permis un soulagement clinique sans disparition des signes déficitaires confirmés par les explorations électrophysiologiques. À un an de recul, la patiente présente une récupération complète du nerf tibial postérieur, et partielle du nerf fibulaire.

La paralysie du nerf sciatique suite à la pose d’une prothèse totale de la hanche est une complication grave et non méconnue de la littérature. L’hématome compressif en est l’une des causes rares, son apparition tardive nous parait exceptionnelle. Le diagnostic rapide suivi du drainage chirurgical urgent ne permettent pas toujours une récupération des lésions neurologique qui peuvent être irréversibles.

MOTS-CLÉS: Hématome compressif, paralysie, nerf sciatique, chirurgie, Prothèse de hanche.

INTRODUCTION

Sciatic palsy is a known complication of first-intention total hip prostheses (1). It is a rare but serious complication, and often the cause of prolonged morbidity for patients. The compressive hematoma of the sciatic nerve is one of the causes that can be responsible for delayed paralysis after total hip prosthesis. Its incidence is <0.2% (2). The delayed appearance forms or diagnosed late may be responsible for irreversible neurological damage.

The purpose of the clinical case is to account for the frequency of this complication and the need for clinical sensitization in the early postoperative period, for early management and improvement of functional prognosis.

CASE PRESENTATION

A 32-years-old Moroccan Arab woman with no significant pathological history, with a body weight of 60 kg, was hospitalized in our department for hip osteoarthritis of a congenital dislocation of the right hip (Fig. 1). A total hip prosthesis was then performed under general anesthesia through a postero-external approach with the insertion of a drain of Redon (Fig. 2).

After a short 24-hour stay in surgical resuscitation or received antibiotic prophylaxis, an anticoagulation of 4000 IU of low molecular weight heparin (LMWH) per day and a transfusion of four globular pellets, the patient experienced severe pain in the territories crural and sciatic homolateral without deficit distal sensitivo motors, and which have responded well to a block bi-truncular anesthetic. At the third postoperative stage, the patient presented a progressive installation of a global sensory motor deficit of the major sciatic nerve. The computed tomography (CT) scan revealed a hematic effusion (Fig. 3), the surgical drainage of which confirmed the extent of the posterior compartment of the thigh to the sub-Quadricipitale. The electrophysiological exploration carried out on the fourth postoperative day spoke of a neurotmesis of the right sciatic nerve.

An anti-equine splint was then prescribed and associated with a functional rehabilitation aimed at maintaining a revival and a muscular trophicity, as well as an articual mobilization of the knee and the ankle. At 14 months of development,
the patient presented a total sensory-motor recovery of the posterior tibial and partial area of the anterior fibular nerve. A lateral fibular nerve palsy is always noted, always walking with an anti-equine splint.

**Fig 1:** Congenital dislocation of the right hip.

**Fig 2:** Immediate postoperative control.

**Fig 3:** Compressive hematoma around the sciatic nerve.

**DISCUSSION**

Sciatic nerve paralysis is a known complication of total hip arthroplasty. It occurs mainly in the posterior and transtrochanteric areas with an average incidence of 0.8% (0% to 2.8%) (3). There are several risk factors for the development of this condition, such as hip dysplasia, post-traumatic arthritis, revision surgery and the female sex (4).

In the immediate postoperative period, the neurological deficit may be due to a direct injury during manipulation, traction on the sciatic nerve during surgery or thermal damage by cement.

Delayed sciatic paralysis after total hip replacement is fortunately rare, but can be definitive. They have been reported in the literature (2). Among their causes is the compressive hematoma (5), which has an incidence <0.2% (2). The increase in hematoma formation is generally related to the use of LMWH (6). It may be due to the complete daily dose of anticoagulation in patients weighing less than 70kg or to the sensitivity towards anticoagulants used for tromboprophylaxis (2), which seems to us the case of our patient.
Complete recovery after delayed sciatic nerve paralysis is rare (7). Rapid drainage during early detection of clinical signs of paralysis of the sciatic nerve (pain, paresthesia and progressive loss of dorsiflexion) reverses the situation (2). However, the drains do not always prevent the occurrence of compressional hematoma, hence the need for high postoperative vigilance before any difficult hip prosthetic surgery. Rapid management with surgical drainage improves the functional prognosis and avoids irreversible neurological damage.

**CONCLUSION**

The paralysis of the sciatic nerve after a total hip replacement is a serious and fortunately rare complication. It can be caused by a compressive hematoma in the region of the sciatic nerve. Increased vigilance in the postoperative period is essential because the Redon drain does not always prevent the formation of a hematoma, the evacuation of which constitutes an absolute emergency, thus avoiding irreversible neurological lesions.

**REFERENCES**


