

REHABILITATION OF A PATIENT WITH FEMORAL NERVE PALSY AFTER BILATERAL TOTAL HIP ARTHROPLASTY VIA DIRECT ANTERIOR APPROACH: A CASE REPORT

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Background

Bilateral total hip arthroplasty (THA) has proven to be an effective treatment modality for patients with bilateral hip osteoarthritis, allowing for faster recovery. This case highlights the importance of rehabilitation following THA and the challenges associated with potential complications such as femoral nerve palsy (FNP).

Case report

A 44-year-old female patient with bilateral secondary hip osteoarthritis due to developmental hip dysplasia underwent bilateral THA in a single operative session under general anesthesia, using a direct anterior surgical approach. The patient was mobilized 24 hours after surgery and rehabilitation was initiated. Clinically, active extension of the left knee was absent. On the seventh postoperative day, the patient was transferred to a rehabilitation facility where the initial evaluation recorded passive flexion of 70° in both hips, minimal activity of the left quadriceps muscle (manual muscle test, MMT 1/5), and preserved strength of the distal musculature of the left leg. The right leg showed an expected postoperative status. Clinical suspicion of an acute left FNP was confirmed by electromyoneurography, and ultrasound excluded nerve discontinuity or compression in the left groin. The rehabilitation program included kinesiotherapy, gait training, cryocompression and muscle electrostimulation. After six weeks of inpatient rehabilitation, functional hip range of motion was achieved bilaterally, with persistent weakness in the left knee extensors (MMT 1/5). Outpatient rehabilitation was continued, and after six months, complete recovery of motor deficit was observed. Electromyoneurography also confirmed recovery of the left FNP.

Conclusion

FNP during THA is a relatively rare complication (incidence 0.21%). Studies report recovery periods ranging from six months to two years, with rehabilitation—particularly early muscle electrostimulation of the denervated muscles—remaining the gold standard of treatment. Compared to rehabilitation after unilateral THA, this case required greater focus on achieving symmetrical recovery of hip function and the prevention of complications.

Keywords: femoral nerve palsy, hip arthroplasty