E-Poster

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Gait Analysis in Coxarthrosis and the Effect of Total Hip Replacement: A Case Report

Topic: Complications/Sequelae (ie Spasticity, Immobilization and Frailty)

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BACKGROUND

Osteoarthritis is a chronic and degenerative condition affecting the articular system, primarily the knee and hip. It is one of the most common musculoskeletal disorders in individuals over 60 years old. As the disease progresses, patients develop compensatory gait patterns. Total hip replacement (THR) is increasingly used to treat severe coxarthrosis, but few studies incorporate gait analysis (GA) to assess functional outcomes.

CASE DESCRIPTION

A 67-year-old female patient with bilateral coxarthrosis underwent a left total hip replacement and received GA as part of her rehabilitation. Initially, the patient presented with hip pain and stiffness. Post-surgery, she showed excellent clinical and functional outcomes. Preoperative GA revealed asymmetrical spatiotemporal parameters (STP), including prolonged support phases.

Kinematic analysis demonstrated a rigid pelvis with antepulsion throughout the gait cycle and bilateral hip kinematic disturbances with reduced range of motion. Postoperative GA showed improved STP, a slight increase in walking speed (0.4 m/s), and restored range of motion in the left hip.

DISCUSSION

Total hip replacement has been a routine procedure for severe osteoarthritis for over 30 years, with patient satisfaction rates exceeding 80%. It significantly reduces pain and improves functional capacity. While patient satisfaction and orthopedic scores are valuable, GA provides a detailed assessment of joint angles and loads, highlighting subtle functional improvements or deviations from normal values.

CONCLUSION

Total hip replacement leads to significant clinical and biomechanical improvements in patients with coxarthrosis. Gait analysis offers a precise evaluation of functional recovery, particularly in clinically complex cases.

Statement of Disclosures

None

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