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“Influence of Lumbar Spine Fusion on Total Hip Replacement Patients”

Recent literature clearly correlates instrumental lumbar fusion(LF) and total hip arthroplasty(THA) with increased risk of complications and particularly dislocation and worse clinical outcomes, however none of those studies describes the dynamic relationship between these coordinated joint pathologies.

The purpose of this cross-sectional study is to investigate the long-term functional status of individuals having had both a THA and an LF. The primary objective will be to assess the spine-pelvis-hip changes that occur during a sit to stand task in patients that have had both a THA and a LF and compare it to a group of patients that have had a THA alone. Secondary objective will be to compare pain and functional status between these two groups of patients.

All patients from both groups will undergo x ray evaluation in a standing and sitting lateral position as well as standing and supine anteroposterior views of the pelvis and radiologic parameters will be recorded. Biomechanical data by three-dimensional lumbar spine, pelvis, and thigh angles will be acquired during motion analysis. In addition, a series of validated questionnaires will be collected.

We hope to provide additional information in understanding the complexity of this dynamic spine-pelvis-hip relationship, especially between LF and THA and ultimately assist orthopaedic surgeons to deliver optimal patient satisfaction.