

Spine or Hip First? Outcomes in Patients Undergoing Sequential Lumbar Spine or Hip Surgery

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INTRODUCTION: Lumbar spine pathology frequently coexists in patients with hip arthrosis. There is controversy on whether lumbar or hip pathology should be first addressed. This study aims to evaluate the outcomes of sequential lumbar spine (LSP) or hip arthroplasty (THA) or vice versa.

METHODS: Using the PearlDiver Mariner database from 2010 to 2020, we reviewed the records of 241,279 patients with concurrent hip arthritis and lumbar spine disease defined as spinal stenosis, lumbar radiculopathy or degenerative disc disease. Rates of subsequent surgery in either the hip or spine, opioid requirements, and rates of hip dislocation were analyzed using compared Chi-squared analysis.

RESULTS: Overall, 48,515 (20.11%) patients diagnosed with hip and spine pathology underwent only THA, 10,507 (4.35%) had only LSP and 6,458 (2.68%) patients with concurrent hip/spine disease underwent sequential operative treatment of either the hip joint or lumbar spine within 2 years. The proportion of patients who underwent THA first and then lumbar fusion was significantly lower compared to patients who underwent spinal surgery first followed by THA (5.66% vs. 23.74%, $p < 0.001$). This disparity was significant at 5 years ($p < 0.001$). Opioid requirements after 1 year were lowest among patients undergoing only THA (440.8 pills/month), followed by LSP and then THA (445.24 pills/month), THA and then LSP (457.70 pills/month), and finally only LSP (649.07 pills/month). Further, THA following LSP was associated with significantly higher rates of dislocation compared to patients undergoing THA first (3.18% versus 1.89%, $p < 0.001$).

DISCUSSION AND CONCLUSION: Patients with concurrent spine and hip disease undergoing hip arthroplasty first have a lower risk of subsequent spine surgery, opioid requirement, and risk of postoperative instability compared to patients having lumbar replacement should be prioritized.

