Shyam Ramachandran, Class 2025

Campus: Baylor University Medical Center, Dallas, TX
Research Area: Factors associated with the choice for hemiarthroplasty versus total hip arthroplasty for femoral neck fracture
Mentor: David Ring, MD PhD (Orthopaedic Surgery, Hand and Upper Extremity)
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Shyam Ramachandran is a medical student at Texas A&M School of Medicine conducting clinical research in orthopaedic surgery in the Department of Surgery and Perioperative Care at Dell Medical School under the guidance of David Ring, M.D., PhD. Their research project aims to understand treatment options for femoral neck fractures from the surgeon and patient points of view. Previous studies suggest advantages for total hip arthroplasty compared to hemi-arthroplasty and vice versa. For example, a retrospective study out of Canada that reported a reduced risk for revision as well as decreased health-care costs within the first year after surgery for the THA group compared to hemi-arthroplasty (Ravi et al, J. Bone Joint Surg Am, 2019). In contrast, a large retrospective cohort of over 70,000 patients, reported lower complication and dislocation rate for patients receiving a hemi-arthroplasty compared to THA, in patients with 2 year follow-up (Wang et al, J. Orthop Trauma, 2017. This MSE study aims to understand which patient characteristics surgeons consider when deciding for a total hip arthroplasty or a hemi-arthroplasty, and which surgeon factors are associated with that decision. The outcomes of this study will help orthopaedic surgeons provide optimal care for patients presenting with a femoral neck fracture.