

Patellar Tendon Reconstruction Using LARS Artificial Ligament Augmentation after Total Knee Arthroplasty: 2 Cases Report P-015

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**Introduction:** The most appropriate procedure for surgical treatment of patellar tendon rupture after total knee arthroplasty was still not clear. Disruption of the patellar tendon is an uncommon but technically challenging complication after total knee arthroplasty. We present a new surgical technique designed to overcome many of the limitations of allograft reconstruction and potentially improve outcomes in patients with patellar tendon disruptions after total knee arthroplasty. To our knowledge, this technique has not been previously described.

**Materials and Methods:** Case 1: An 77-year-old woman had a primary TKA 1 year ago. She sustained a patellar lower pole fracture with patellar tendon rupture because of falling down. Radiographs revealed patella upward migration. Case 2: An 76-year-old woman had a primary TKA 6 years ago and distal femur periprosthetic fracture post ORIF 2 years ago. Left knee weakness and loss of extension mechanism were complained. There was a palpable gap at the level of the patellar ligament. Lateral radiographs revealed patella alta.

**Surgical technique:** The patella tendon exposed as well as the tibial tubercle. The snip quadriceps procedure was done for inferior retraction of patella. The patella was drilled vertically along both side of patella button parallelly with 4.5 mm cannulated drill. A AC30RA LARS ligament was passed from upside down as a loop. The tibial tubercle was drilled from both side about 3 cm below the tibial tray, 4.5 mm tunnels were made crisscrossly the both end of ligament were passed and 5.0mm titanium screws were fixed retrogradely for better fixation. The two ends were crossed in front of the tibial crest about 7 cm below the tray, and fixed with two staples. The two suture ends were pulled upward to sutured onto the patellar tendon with keseler fashion.

**Discussion:** Multiple treatment options having been described previously. Inconsistent results in the literature with variable outcomes have been recorded. The ligament advanced reinforcement system (LARS) ligament is a polyester made of polyethylene terephthalate (PET). Many literatures have reported reconstruction of ACL, PCL, and CC ligament with LARS and the short-term results appear good. With using LARS ligament for augmentation, the operating time is shorter, there's no morbidity associated with an autograft and the rehabilitation can be more aggressive, thus resulting in quick recovery.

Rotation Hinge Total Knee Prosthesis Using in Patient with Marfan Syndrome: A Literature Case Report P-016

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**Introduction:** Marfan syndrome is a variable autosomal dominant disorder. The condition may manifest in the musculoskeletal manifestations include scoliosis, dural ectasia, protrusio acetabuli, and ligamentous laxity which causes the instability of knee. Rotating-hinge knee implants are used for revision total knee arthroplasty in patients with severe ligament instability and bone loss. We report a very rare case of a 46 year-old patient of Marfan syndrome with knee bilateral osteoarthritis who received total knee arthroplasty with rotation hinge knee prosthesis.

**Materials and Methods:** We present a case a 46 year-old female patient of Marfan syndrome with manifestation of type A aortic dissection and congenital dislocation of bilateral knee joint. Both knee osteoarthritis was diagnosed and received total knee arthroplasty with NexGen Rotating Hinge Knees (Zimmer, Warsaw, Indiana) in March, 2012.

**Discussion:** Patient with Marfan syndrome may present musculoskeletal abnormalities such as early-onset osteoarthritis, patellar instability, ligamentous laxity. In this case, she had severe deformity and chronic dislocation of bilateral knees. Rotating-hinge knee prosthesis not only can correct the deformity but also can provide good stability for such knees with severe deformity and ligament instability.