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Deformity correction of foot and ankle after TKR: Case report

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Introduction: Total Knee Arthroplasty (TKA) has proved to be a highly successful procedure for the relief of debilitating pain associated with degenerative joint disease. The 10 to 15-year survivorship of primary TKA now routinely exceeds 90%. However, despite advancements in surgical technique, implant design and postoperative management, complications continue to be a relatively common. Like infection, tendon rupture, instability which is common complication after TKR, the instability of hind foot alignment has also been reported. We reported about a satisfied case; ankle, foot deformity correction for malrotation after TKA which didn't performed about correction of knee.

Case Report: 68-year patient has visited and showed hind foot malalignment and claw toe deformity after total knee arthroplasty one year ago. Patient was suffered by pain and feel like paralysis below ankle which was unable to walk about one year ago. Patient has insufficient action on plantar flexion of ankle and has limited ROM of toes. Also, we found in standing position patient showed equinovarus deformity of ankle, claw toe deformity of foot and Achilles tightening about 6 cm. On AP standing view patient showed genu recurvatum and slightly elevation of right ankle joint. To correct these deformities, we did tibialis anterior tendon transfer, flexor hallucis longus graft, plantar fasciotomy and ilizarov external fixator applied. AP standing view after deformity correction showed genu recurvatum angle and hind foot alignment was improved and patient feel much better than before surgery.

Discussion: Genu recurvatum deformations are unordinary before adding up to knee arthroplasty, happening in under 1% of patients. In view of its irregularity, concern may exist with respect to the repeat of the deformation and the potential for flimsiness after TKA. Recurvatum might be related with an extreme rigid distortion, including genu valgum, capsular or ligamentous laxity and once in a while, neuromuscular illness. Within the sight of the last mentioned, a plantar flexion contracture of the lower leg additionally might be available. Subsequently, particular consideration ought to be offered preoperatively to assessment of the quadriceps, hamstrings and gastrocnemius complex. Since genu recurvatum is known to repeat in patients with certain neuromuscular issue, the etiology of the hyperextension disfigurement must be explained altogether before medical procedure. Without neuromuscular malady, be that as it may, hyperextension disfigurements tend not to repeat after TKA. Over the past few years, many different procedures for the correction of genu recurvatum have been proposed. The least technically challenging approach is to tighten the extension gap by underresecting the distal femur, using a thicker polyethylene liner and placing the femoral component in slight flexion. Another option is to tighten the collateral ligaments in extension to obtain a tighter extension gap and prevent hyperextension deformity. The other option is to use a rotating-hinge TKA with an extension stop to reduce the risk of hyperextension instability postoperatively. We focused on the problem of ankle joint due to genu recurvatum and performed an anterior tibialis tendon transfer and plantar fasciotomy as the main operation for soft tissue surgery to correct the malalignment of hind foot and correct the following claw tow deformity. We experienced a satisfactory case in which genu recurvatum was also corrected as a result of the corrected ankle joint.

Biography

Gab-Lae Kim is currently an Associate Professor in the Hallym University College of Medicine in the Department of Orthopedic Surgery at Seoul, South Korea.

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