



Commentary

DOI: 10.36959/453/560

A Technical Tip: Surgical Exposure of Proximal Tibia in Total Knee Replacement Arthroplasty Using a Pin to Retract Patellar Tendon

Kheradmand Behfar* and Wilkinson, MCP

Department of Trauma & Orthopaedic Surgery, King's College Hospital, London, UK



The tibial cut in knee arthroplasty requires adequate exposure of the proximal tibia while protecting the surrounding structures [1]. The medial, lateral and posterior structures are usually protected with retractors held by one or more assistants [2]. The Patellar Tendon must be protected during tibial preparation [3]. Damage to the tendon by scalpel or saw is a disastrous complication [4]. This can be avoided by our technique of Patellar Tendon retraction during a knee replacement which also facilitates tibial exposure without the need for any further assistant. To the best of our knowledge this



Figure 1: Pin is passed behind patellar tendon 214 × 381 mm (72 × 72 DPI).



Figure 2: Pin used as a lever to retract the patellar tendon 214 × 381 mm (72 × 72 DPI).

***Corresponding author:** Kheradmand Behfar, Department of Trauma & Orthopaedic Surgery King's College Hospital, London, UK

Accepted: May 12, 2021

Published online: May 14, 2021

Citation: Behfar K, Wilkinson (2021) A Technical Tip: Surgical Exposure of Proximal Tibia in Total Knee Replacement Arthroplasty Using a Pin to Retract Patellar Tendon. *J Orthop Surg Tech* 4(1):276-277



Figure 3: Pin is hammered into tibia 214 × 381 mm (72 × 72 DPI).

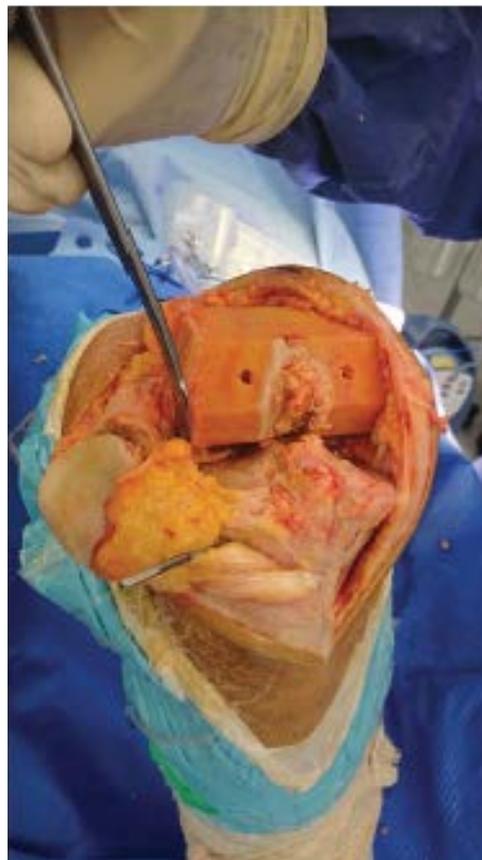


Figure 4: Proximal tibia circumferential exposure 214 × 381 mm (72 × 72 DPI).

has not been previously described.

Following anteromedial knee approach and femoral preparation the patella is surgically inverted and dislocated laterally. At this stage a pin is passed proximal to the tibial tuberosity posterior to patellar tendon (Figure 1). The pin used is the same as that used to hold the standard cutting jigs in place whilst performing the bone cuts. The lateral cortex of the tibia is used as a fulcrum to retract the patellar tendon distally and laterally (Figure 2). Care must be taken to ensure that the patella tendon is not avulsed from the tibial tuberosity, a risk whether retractors or a pin is used. Finally, this pin is hammered into the proximal tibia while applying a sustained retracting force on the patellar tendon (Figure 3). This will expose the proximal tibia circumferentially. The tibial cut,

preparation and cementing will be safer and more precise (Figure 4). The senior author has used this technique for over twenty years without complications.

References

1. Insall JN (1971) A mid-line approach to the knee. *J Bone Joint Surg* 53: 1584-1586.
2. Dorr LD, Boiardo RA (1986) Technical considerations in total knee arthroplasty. *Clin Orthop Relat Res* 205: 5-11.
3. Vaishya R (2016) Surgical approaches for total knee arthroplasty. *Clin Orthop Trauma* 7: 71-79.
4. Insall JN (1993) Surgical approaches, In: Insall JN, Windsor RE, Scott WN, et al. *Surgery of the knee*. Churchill Livingstone, New York, 137.

DOI: 10.36959/453/560