

Modified Combined Approach For Posterolateral Tibia Plateau Fracture

¹Hwang PX, ¹Liew HC, ¹Wong TS, ¹Gunaseelan P, ¹Hishamuddin S
¹Orthopedic Department, Hospital Sultanah Aminah, Johor Bahru

INTRODUCTION:

When encountering posterolateral corner with anterolateral tibial plateau fracture, often the approaches available are limited. We report a case that utilized the anterolateral with posterolateral approach without fibula osteotomy to tibial plateau fracture.

CASE REPORT:

18-year-old lady who had a fall from 3 meter height . Imaging revealed tibial plateau fracture with anterolateral and posterolateral corners involvement. Perioperatively, floppy lateral position was used, skin incision was marked centered at fibula head, curved proximal-posteriorly along biceps femoris(BF), distally following conventional anterolateral approach to tibial plateau. After common peroneal nerve(CPN) was isolated, posterior intermuscular window was created between BF and lateral gastrocnemius head. Soleus muscle that limits the window distally can be dissected to allow posterolateral plate placement.¹ A second window over anterolateral approach, following lateral arthrotomy with meniscus lifting, allowed direct visualization of anterolateral fragments, aiding reduction and fixation. With these windows, reduction, followed by posterolateral buttress plating and anterolateral plating adequately stabilized the fractures.

Postoperative recovery was uneventful and she was discharge well followed by serial outpatient visits. On 6 months follow up she reported no pain over right knee. Right knee ligaments was stable, full knee ranges of motion achieved with no joint line tenderness.



FIGURE 1:
PRE OP
CT-SCAN

FIGURE 2: INTRA-OP POST FIXATION

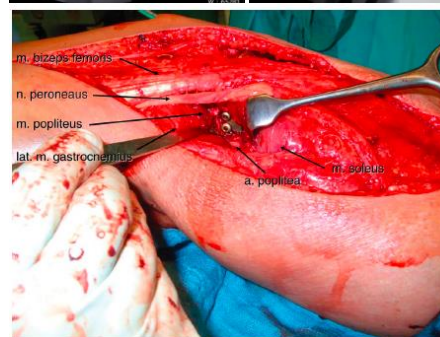


FIGURE 3: INTROPERATIVE PLANE

DISCUSSIONS:

The posterolateral approach described by Lobenhoffer et al allows good view of posterolateral tibial plateau, at the expense of considerable trauma to the posterolateral structures. The isolated posterior approaches too require dorsal arthrotomy in the posterolateral area, invariably dissecting important ligaments around the area, and it doesn't allow visual fracture reduction.^{2,3}

CONCLUSION:

We report excellent clinical outcome with this approach, that offers good posterolateral area preservation, ability to address anterolateral and posterolateral corners fractures simultaneously.

REFERENCES:

1. Frosch et al J Orthop Trauma Volume 24, Number 8, August 2010.
2. Carlson DA. Posterior bicondylar tibial plateau fractures. J Orthop Trauma. 2005;19:73-78.
3. Ruedi TP, Buckley RE, Moran CG. AO-