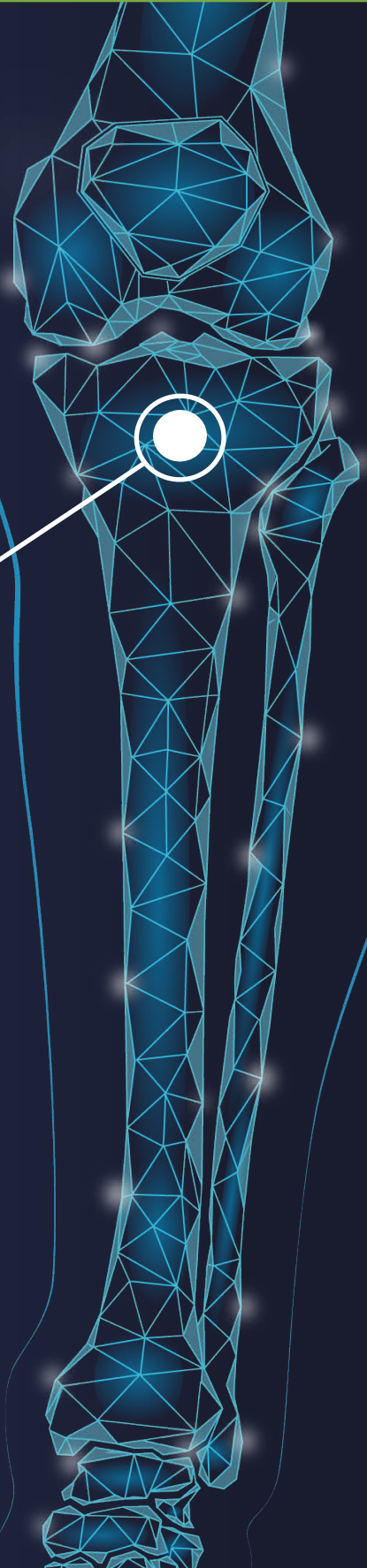


Medical Education Series

# Bicondylar Osteoporotic Tibial Plateau Fracture

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### PATIENT HISTORY

88 year old patient lives alone, fall and injury 3 days prior to admission. Presented with pain in the left knee. During that three-day period, the patient tried to walk and noted worsening of swelling and pain of the left knee. Comorbidities: dyslipidemia, hypothyroidism, osteoporosis, COPD, osteoarthritis, and B12 deficiency.

### DIAGNOSIS

Examination revealed some edema on the entire left lower extremity with no open wound. Range of motion was limited, secondary to pain and significant knee effusion.

Initial radiographs: Bicondylar osteoporotic tibial plateau fracture with some angulation and impaction with displacement and unstable appearance (Figs. 1, 2).

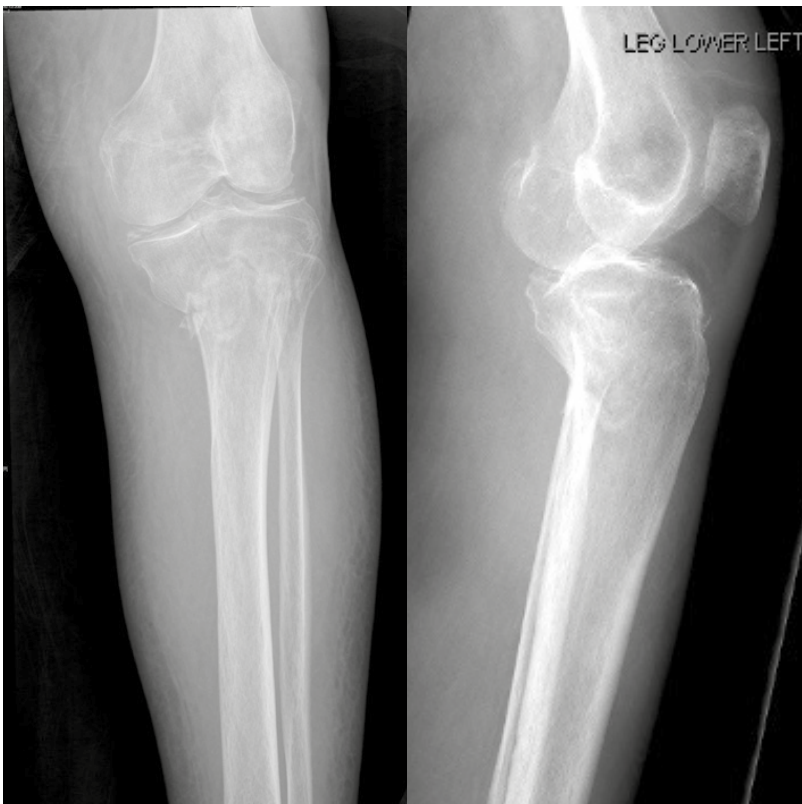


Figure 1. Pre-operative anterior x-ray of tibia plateau fracture.

Figure 2. Pre-operative lateral x-ray of tibia plateau fracture.

### TREATMENT

- Open reduction and internal fixation of left tibial plateau bicondylar fracture with percutaneous lateral plate application (Zimmer™ NCB five hole locking plate).
- CERAMENT BONE VOID FILLER injected into resulting bone void following fracture reduction. Prior to initial setting of the CERAMENT BVF the two remaining screws were inserted. This was visualized on the C-arm imaging throughout (Figs. 3, 4).
- Excellent restoration of anatomic alignment and good stability of the tibial plateau and metaphyseal fracture, both in the anteroposterior and lateral views was demonstrated.

## OUTCOME

- Patient was transferred to a rehabilitation facility and therapy initiated with good progress.
- At six months patient was ambulating well with no significant pain or discomfort.
- At eighteen months the patient was improved and ambulating well for her age. Radiographs demonstrated excellent remodeling of CERAMENT BVF into bone with consistent and homogeneous trabeculation pattern and density observed at the fracture site (Figs. 5, 6).



Figure 3. Intra operative anterior x-ray with placement of CERAMENT BVF.



Figure 4. Intra operative lateral x-ray with placement of CERAMENT BVF.



Figure 5. At 18 months anterior x-ray demonstrating excellent remodeling of CERAMENT BVF into bone.



Figure 6. At 18 months lateral x-ray demonstrating excellent remodeling of CERAMENT BVF into bone.



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