

Treatment of Complex Plateau Tibial Fracture with

Graftys® QUICKSET Bone Void Filler

Patient: 35 years old female

Case Presentation

Intervention of Dr. Sebastien Parratte (Pr JN ARGENTON Department of Orthopedic Surgery Ste Marguerite University Hospital, Marseille, FRANCE) on a complex-tibial plateau fracture.

Treatment

The surgical plan consists on an ORIF with plate, screws and wires. The defects are filled with Graftys® QUICKSET.

The immediate post-operative care is the use of a custom-made articular bracing, immediate passive manual range of motion rehabilitation, and no weight-bearing for 3 month.

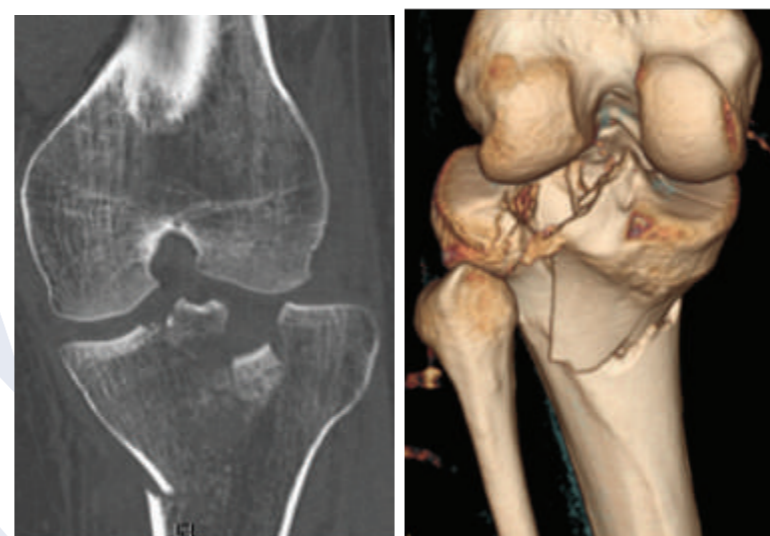
Outcome

- After 3 months, a good osseointegration and a homogenous interface between Graftys® QUICKSET and bone is observed. During the procedure, a biopsy is taken for histological analysis. It confirms the good osseointegration of Graftys® QUICKSET in direct contact with new bone trabeculae, with no fibrous interface.

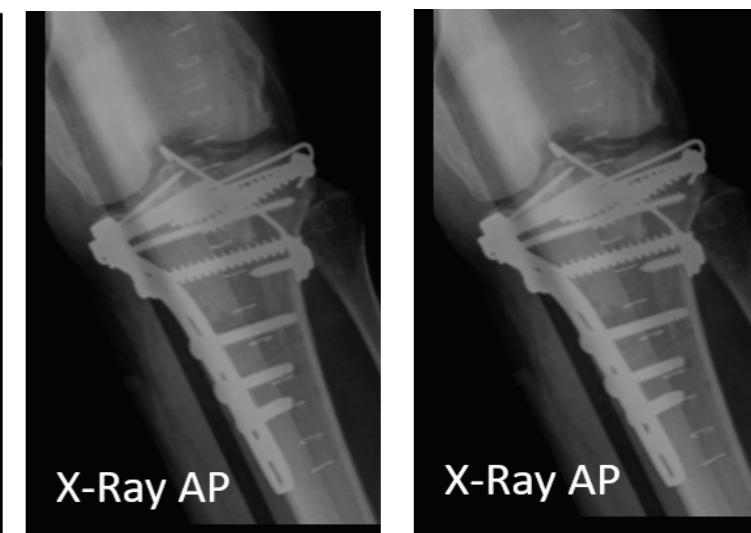
- After 8 months, the activities of daily living are pain free and the cycling is OK.

- After 2 years, the resorption of the graft is almost completed and the patient's mobility is pain free.

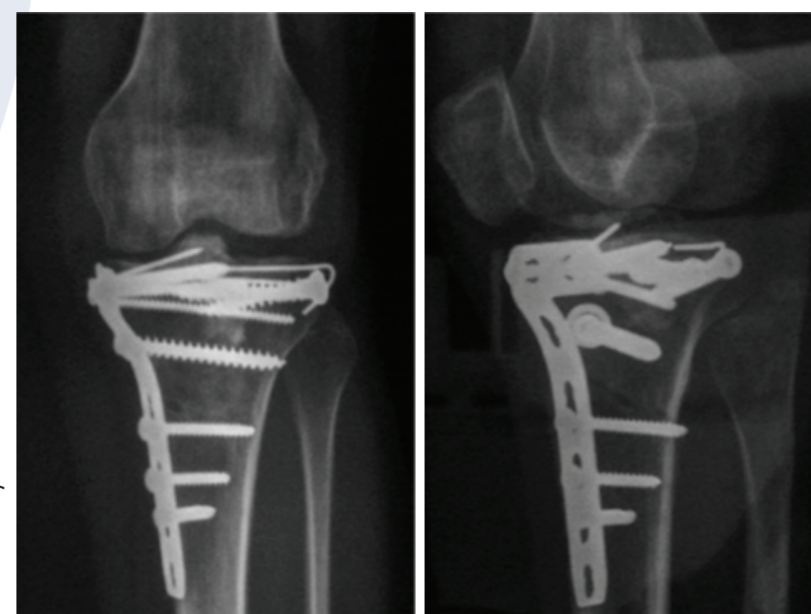
Pre-operative Scans



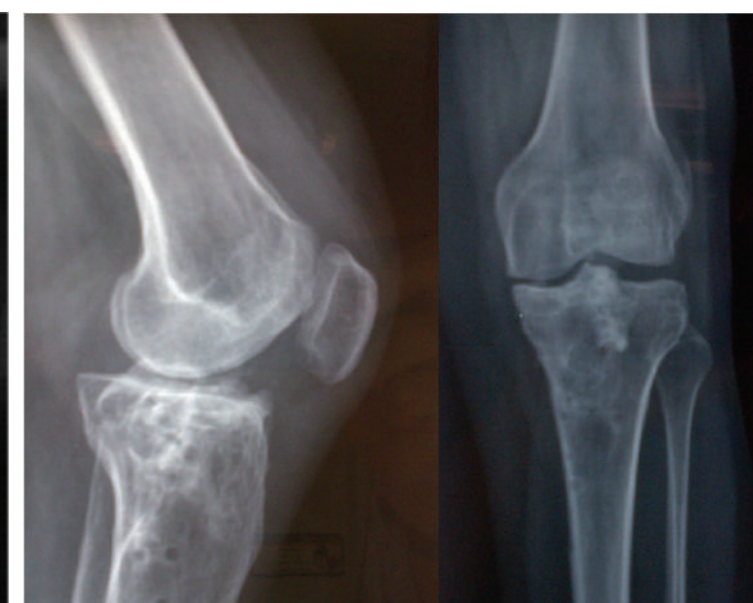
Immediate post-operative



X-Rays after 8 months



Results after 2 years



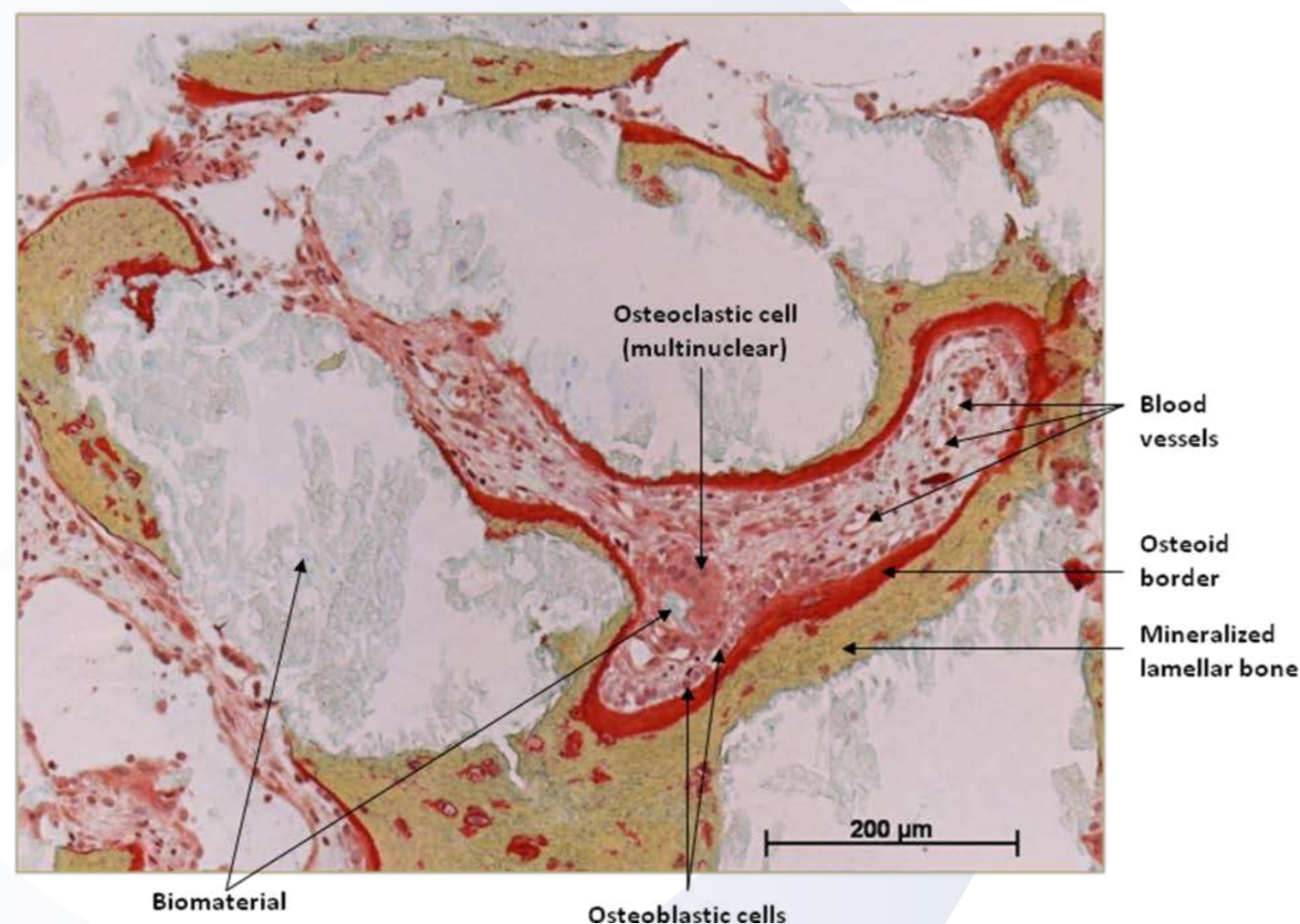
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Patient: 35 years old female

4 month post-operative histology:

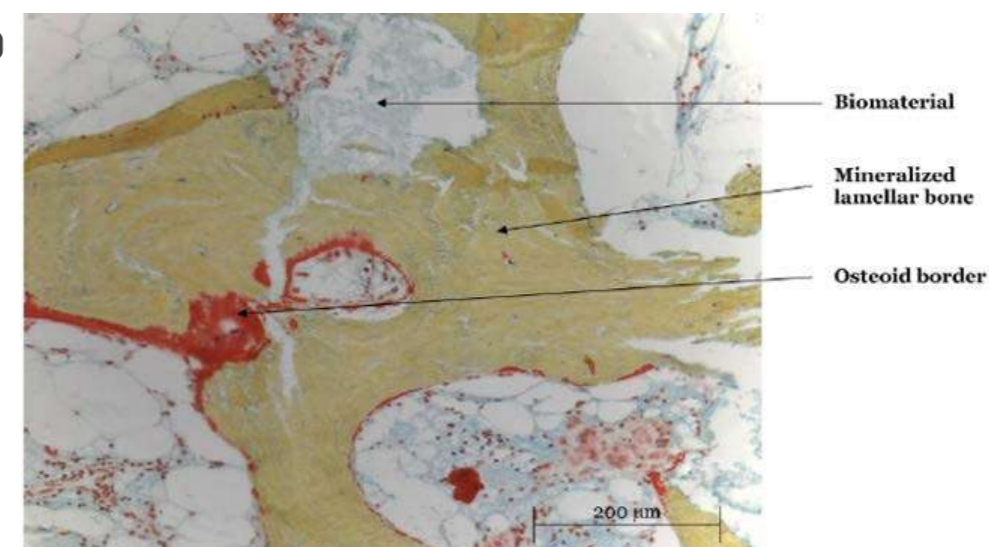
X 10



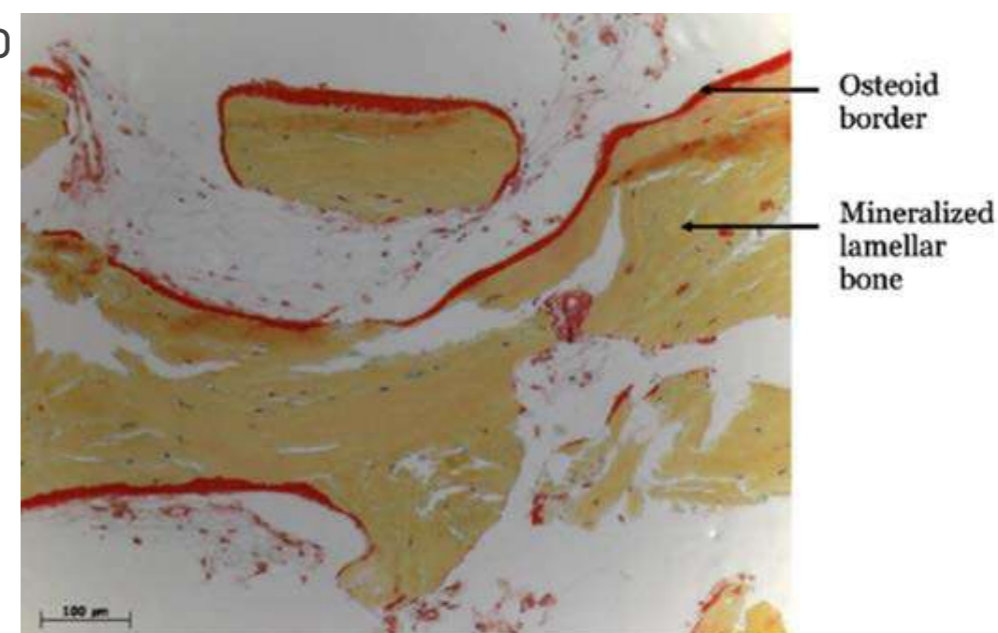
- Good osseointegration of QuickSet (in blue) in direct contact with new bone tubercular (no fibrous interface);
- A very close intertwining between biomaterial (in blue) in degradation process and mineralized lamellar bone (in brown);
- Presence of osteoblastic cells (cuboid) in relation to osteoid borders in mineralizing process;
- In direct contact, osteoclastic cells (multinuclear cells) are resorbing the biomaterial
- Presence of numerous blood vessels.

1 year and 10 month post-operative histology:

X 10



X 10



- Very good osseointegration of little remaining cement - QuickSet (in blue) in direct contact with new mineralized lamellar bone (in brown).
- Recolonization of injured area by bone marrow and absence of inflammatory cells.
- Active bone remodeling, suggesting the presence of close cement in degradation process.