

# Combining Bone Substitutes and Vancomycin to Reduce Infection Rates in Pilon and Tibial Plateau Fractures

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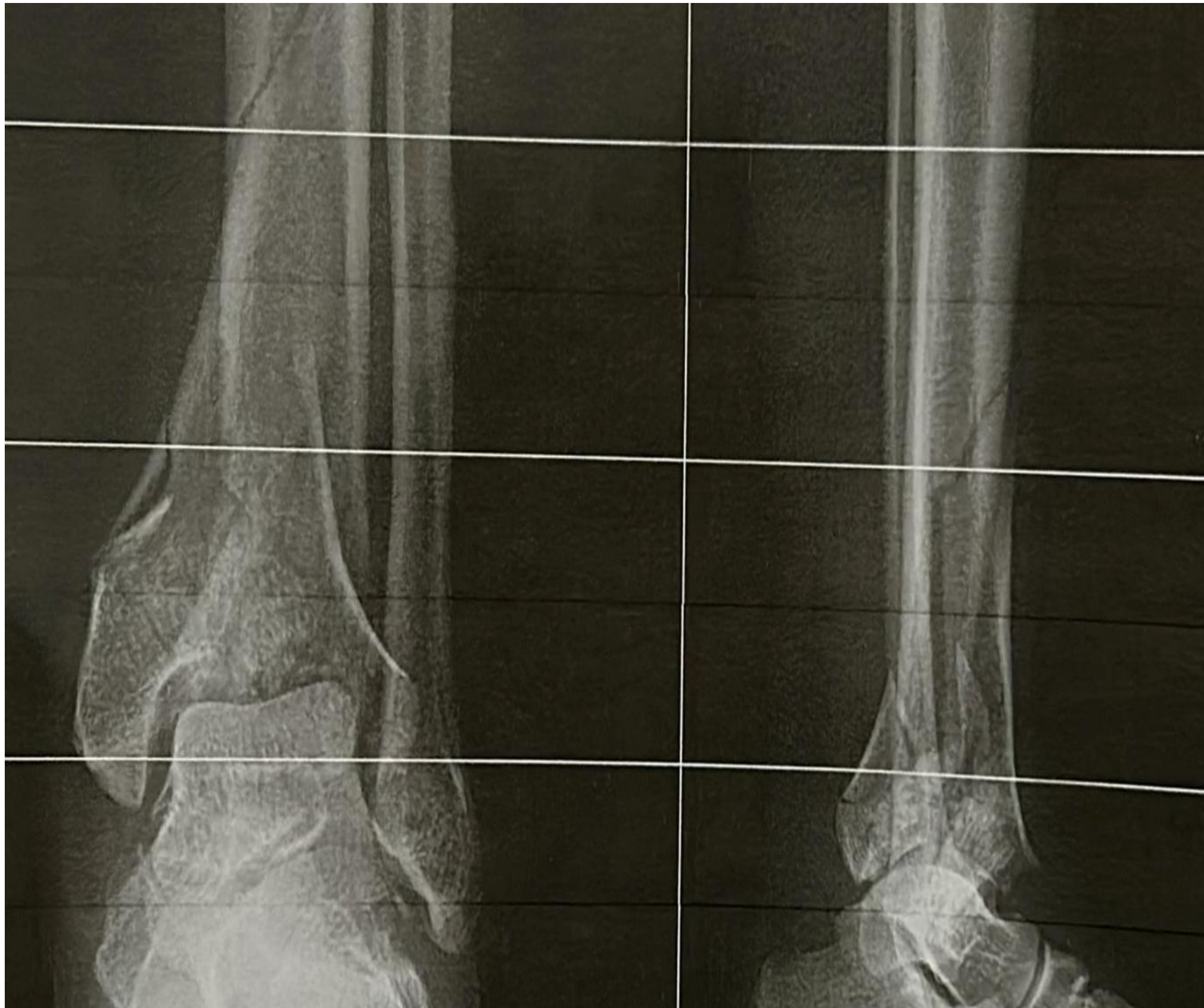
0/14  
postoperative infections

0%  
infection rate  
95%CI = (0.0%-23.2%)

86.6%  
maintenance of reduction  
at 6 months\*  
95%CI = (57.2 - 98.2%)

Key message: In a pilot cohort of 14 high-risk fracture patients, osteosynthesis combined with antibiotic-loaded PerOssal® was associated with no postoperative infections and 86.6% maintenance of reduction at 6 months after 3 months of weight-bearing.

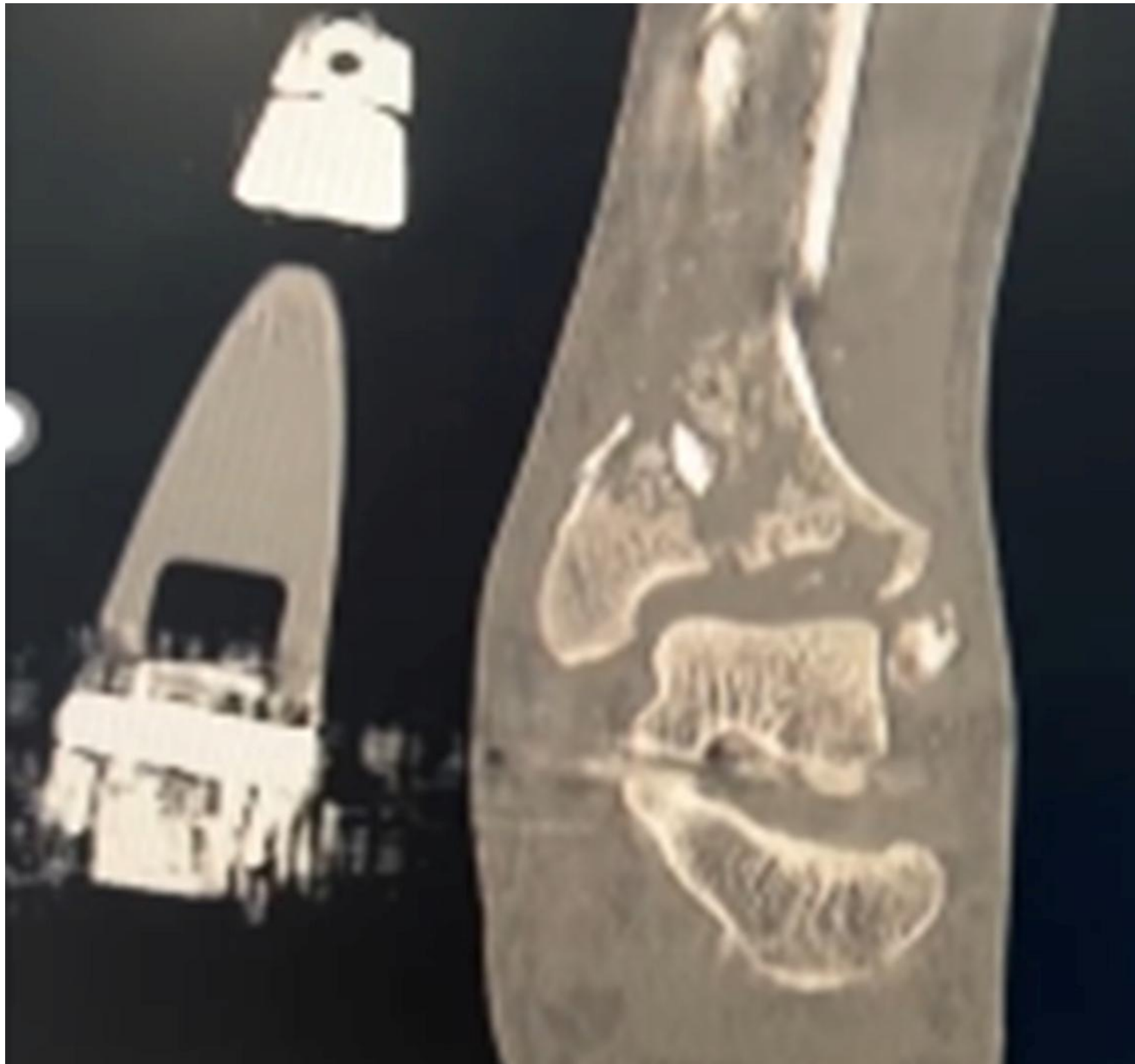
## REPRESENTATIVE CASE IMAGES



Baseline AP/lateral radiographs: distal tibia/pilon injury



Clinical soft-tissue status during treatment



CT assessment of complex fracture pattern



Fixation follow-up



Postoperative AP/lateral radiographs and clinical view

| STUDY DESIGN                                                                                                                                                                         | TREATMENT APPROACH                                                                                                                                                                               | RESULTS                                                                                                                                                                | CONCLUSION                                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Retrospective, single-arm, non-randomized cohort study with 14 adult patients. Each patient had at least one infection risk factor, such as diabetes, smoking or soft-tissue injury. | Osteosynthesis with subchondral defect filling using PerOssal® loaded with vancomycin as an adjunct in surgical management. Radiographic follow-up assessed structural integrity and subsidence. | Observed postoperative infection rate was 0% (0/14; 95% CI, 0.0%-23.2%). This was lower than the 40% historical reference (p=0.0008) and the 30% reference (p=0.0068). | In this pilot cohort, antibiotic-loaded PerOssal® was associated with zero postoperative infections and adequate mechanical support to maintain fracture alignment in the majority of cases. |

## TAKE-HOME FOR CONGRESS DISCUSSION

0 infections in 14 high-risk fracture patients, supported by representative imaging of injury severity, fixation strategy and soft-tissue evolution.

Keywords: Tibial Plateau Fracture | Tibial Pilon Fracture | Calcaneus Fracture | High-Energy Trauma | Postoperative Infection | PerOssal® | Vancomycin