

The advantage of Intramedullary bone endoscopy and Vancomicine bone void filler in the treatment of Chronic Lower Tibial Infection.

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Chronic osteomyelitis is characterized by the presence of sequestrum, intramedullary abscess, and fistulous tracts. Bone endoscopy provides a minimally invasive approach to drain the intramedullary abscess and remove the dead and infected tissues under direct endoscopic visualization. Vancomicine's bone void filler is an injectable, moldable and drillable synthetic bone void filler consisting of 40% hydroxyapatite, 60% calcium sulfate and the radio-contrast agent iohexol.

The unique ratio of hydroxyapatite and calcium sulfate is designed to enable to resorb at the same rate that bone forms. Calcium sulfate acts as a resorbable carrier for hydroxyapatite, and hydroxyapatite is highly osteoconductive, promoting bone ingrowth.

The characteristics of Vancomicine Bone Void Filler make it ideal for minimally invasive surgery and open procedures where bone remodeling is required. Hydroxyapatite (HA) and calcium sulfate (CaS) are naturally radiopaque, radiopacity is enhanced by a liquid component consisting of the radiopaque agent iohexol.

This allows for the precise application of CERAMENT as it is easy to visualize under fluoroscopy.

A 50-year-old patient from a third world country, who had already undergone 3 operations for a distal fracture of the tibia and tibial malleolus, had chronic osteomyelitis with resorption of the anterior part of the tibial pilon on MRI and CT, in addition to arthrosis and osteochondritic phenomena of the ankle. The patient was treated in various phases. Phase one with bone and tissue biopsies and microbiological culture swabs of bone and soft tissues for diagnosis of the pathogen of the infection. After 7 days and the positivity of the samples to Staphylococcus aureus Vancomycin sensitive, the patient underwent biportal intramedullary bone endoscopy and injection of Vancomycin Void Filler. After 6 months the patient has all the infection markers negative, a reduction in pain when walking, has had no post-operative complications, and has resumed his work activity.

The purpose of this Technical Note is to describe the details of biportal endoscopic intramedullary debridement and injectable Vancomicine Void Filler for management of chronic osteomyelitis of the distal metaphyseal region of tibia.