

Abstract: Eosinophilic granuloma is the most common expression of Langerhans cell histiocytosis and corresponds with typical bone lesions. Early clinical signs can occur in the mandible and can cause extensive destruction of the periodontal tissues. Pathologic fracture is an unusual finding. A case of misdiagnosed eosinophilic granuloma in a 45-year-old man treated with free fibula flap and implant-supported overdenture prosthesis is reported. Free fibula flap with dental implants is a safe and reliable method for comprehensive functional and aesthetic mandibular defect reconstruction.