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External fixation with a locking plate for a tibial fracture complicated by osteomyelitis: a case report

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Keywords: external fixation, locking plate fixation, osteomyelitis

INTRODUCTION/OBJECTIVES: External fixation using a locking plate is an uncommon approach, however good clinical outcomes have been reported in the literature so far. It provides certain benefits over conventional external fixators, which hinder everyday activities due to their bulkiness. Aside from being more convenient for the patient, external fixation with locking plate results in less soft tissue trauma, low-profile stable fixation and shortened hospital stay.
CASE PRESENTATION: We present a 41-year-old male patient who sustained a tibial shaft fracture, treated with open reduction and internal fixation (ORIF) with plate and screws, complicated by osteomyelitis. A decision to treat by external locking plate fixation was made due to severity of infection and compromised soft tissue envelope. Microbiological analysis of a bone biopsy sample was positive for Staphylococcus aureus. Infection was initially treated with cloxacillin and rifampicin intravenously for two weeks, followed by ten-week oral course of trimethoprim-sulfamethoxazole and rifampicin. The locking plate was removed six months post-operatively, after patient showed signs of bone healing and complete absence of bone infection. On a six-month follow-up, patient ambulates without assistance and is completely pain free.
CONCLUSION: This case report supports external locking plate fixation as a treatment option for a selected population of patients. Evidence concerning the biomechanical characteristics of external locking plate fixation is still inadequate to support the clinical use, therefore more robust studies are required.

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Facial nerve paralysis caused by a parotid haemagioma: a case report

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Keywords: facial paralysis, haemangioma, parotid gland

INTRODUCTION/OBJECTIVES: Haemagiomas, benign vascular tumors, are the most common tumor found in children. They can occur in any location including the salivary glands, most often the parotid. Most haemagiomas involute spontaneously, requiring only conservative management. Active treatment of parotid haemangiomas is needed in the rare case of disfigurement, airway obstruction, hemorrhaging or other severe complications.
CASE PRESENTATION: The patient is an 11-year-old girl first presenting with a palpable mass in her right parotid causing pain and discomfort which measured approximately 3,5 cm. A following MRI scan supported the diagnosis of a haemangioma permeating throughout the parotid. Surgical treatment was indicated, but the tumors large size determined a high risk of intraoperative facial nerve damage. To combat this, the patient underwent angiography and embolization. Instead of an expected reduction, the haemagioma continued to expand which lead to facial asymmetry and weakness with periods of intense pain. This resulted in a right facial palsy House-Brackmann grade III. The patient then underwent surgery to remove the haemangioma and to repair the facial nerve. A pathohistological diagnosis of intraoperative samples confirmed a haemangioma. Following the procedure, the patient developed a right facial palsy House-Brackmann grade VI but retained the ability to blink. The degree of the patients future functional recovery remains uncertain.
CONCLUSION: Haemangiomas are most commonly a benign condition, but some cases can lead to severe complications. Every case must be carefully assessed and all possible outcomes must be taken into consideration, such as facial paralysis.