EPIDEMIOLOGY

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The pattern of bone infection is changing, and the incidence is increasing. Bone and joint infection a ff ects around 1 per 10 /uni00A0 000 children across the world. Inadequate initial treatment generates chronic infections in up to one-third of cases. In the developed world, bone infection is frequently seen after injury or surgery (contiguous focus osteomyelitis) and is often implant related (Figure 43.1). Increasing life expectancy , obesity , medical comorbidities (diabetes, peripheral vascular disease, immunocompromise) and increased rates of bone surgery contribute to a group of patients with increased susceptibility to infection. Prosthetic joint replacement is a highly successful therapy for joint disease but is complicated by infection in at least 1% of cases. It was estimated that joint replacement generated more than 70 /uni00A0 000 new cases of prosthetic joint infection (PJI) in the USA in 2020. These are di ffi cult and expensive to treat, myelos , - - -

Treatment of infection of native bones and joints • Treatment of fracture-related and prosthetic joint • infections Figure 43.1 This open fracture of the tibia was treated with internal /f_i xation using a plate. An early fracture-related infection developed, with skin breakdown and exposure of the metalwork.

fracture has decreased but increased use of internal fixation has increased the prevalence of post-traumatic bone infection overall. This will produce a significant economic burden for healthcare providers in the future. Summary box 43.1 Epidemiology of bone infection /uni25CF /uni25CF /uni25CF

Bone and joint infections from haematogenous spread remain common worldwide The increased use of implants for joint replacement and fracture /f_i xation are an important source of new infections Immunocompromised patients are another increasing source (e.g. diabetes, cancer treatment)

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Revision #1
Created 2025-12-31 15:16:29 UTC by Omar Ayman
Updated 2025-12-31 15:16:29 UTC by Omar Ayman