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**ABSTRACT. Background:** Bone and joint infections are known since ancient times, but it was not until early last century that progress was made in the diagnosis and treatment to reduce its morbidity and mortality. Based on the fact there are still some basic aspects of acute hematogenous osteomyelitis which are poorly understood, a revision was carried out in terms of its pathophysiology, diagnostic methods, treatment and complications, in order to provide evidence based data that can facilitate a timely diagnosis and treatment and thus avoid the complications and sequelae of this condition. **Sources:** literature published on the subject in Medline, PubMed and Cochrane Library databases was consulted. **Development:** The entity known as acute hematogenous osteomyelitis, although well defined at present, still brings complications and sequelae in about 6% of children affected. Medical history and physical examination are the cornerstone in the diagnosis, especially in third world countries where not always there is an availability to radiology and laboratory studies. Treatment is based on antibiotics according to the positive blood cultures or bone aspirate from the metaphysis, however, surgical approach with bone decompression either by bone window or perforations done at the compromised bone metaphysis, is usually the rule rather than the exception for treatment. **Conclusion:** Bone and joint infections, although not as common in children, are however entities with unique features where little is known in the medical field, thus going often unnoticed, causing an unfavorable functional and aesthetic result for the patient.

**Keywords:** Antibiotics, complications, metaphysis, osteomyelitis, surgery.