

Clinical and Microbiological Evaluation of Osteomyelitis

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Objective: To investigate clinical aspects and aetiological agents of osteomyelitis with special emphasis on anaerobic infection.

Setting: Basrah University Teaching Hospital, Iraq.

Design: A prospective study.

Methods : Aerobic and anaerobic cultures were made for all cases. The inoculation of operative material on culture media was performed by the bedside.

Results: The study included 134 patients with osteomyelitis. The cases were divided clinically into 4 main groups: haematogenous, exogenous, postoperative and mastoiditis. *Staphylococcus aureus* was the most common causative agent in haematogenous osteomyelitis whereas *Pseudomonas sp.* were the most common causative organisms in postoperative and mastoiditis groups of bone infection. The total number of isolated bacteria was 224, of which 50 (22%) were anaerobes. These anaerobes were isolated from 39 (29%) of 134 patients. The anaerobic organisms were found most frequently in the cases of chronic mastoiditis (57%) and exogenous osteomyelitis (40%).

Conclusion: High prevalence rate of anaerobic bone infection was found specially in chronic cases. Thus, conventional treatment measures may not be beneficial and special type of management should be applied for these cases. Anaerobic culture is also recommended for all cases with osteomyelitis.