Disease of the pulp and periodontium which constitute the vast proportion of odontogenic infections are mainly caused by the endogenous bacterial microbiota in the oral cavity while non odontogenic infections in the same area vary depending on the nature and site of infection. The rational use of antibiotic is important to prevent development of resistant strains and other side effects of drugs. **Aim:** To investigate (i) the prevalence of bacterial species in oral samples of patients with bacterial infection reporting at the Dept of Dentistry (1996- 2007), (ii) to assess the age and sex predilection and , (iii) and species specific relationships, and (iv) to determine the susceptible-resistant biotype profile of the bacterial isolates from odontogenic and non odontogenic infections. **Materials and methods:** Laboratory and clinical data of patient‘s electronic files at Dept of Microbiology, Faculty of Medicine and Teaching Hospital in Hradec Králové for the years 1996-2007 were evaluated retrospectively. **Results:** Bacterial orofacial odontogenic or non odontogenic infection was detected in a total of 678 patients with 350 males (51.6%) and 328 females (48.4%). The bacterial isolates included 48 bacterial species with predominance of facultative anaerobes which accounted for 78.5% (n= 1263) and obligate anaerobes 21.5% (n=346,). Among the facultative anaerobes the most common isolate was *Haemophilus influenzae* (n=320, 19.9%). Obligate anaerobes were highly susceptible to most antibiotics including penicillin while resistance to gentamicin and tetracycline was noted among some strains. Greater than 95% susceptibility was demonstrated by *oral streptococci* to β-lactam antibiotics in comparison to erythromycin and broad spectrum drugs like tetracycline and cotrimoxazole. Coagulase-negative staphylococci and *Staphylococcus aureus* strains also exhibited greater susceptibility to β-lactam antibiotics than broad spectrum drugs. *Enterobacteria* showed the highest susceptibility to piperacillin / tazobactam, 3 rd and 4th generation of cephalosporins whereas there was unusually high resistance to ampicillin. Isolates of *Haemophilus influenzae* were susceptible to a wide range of β-lactam antibiotics and 2nd generation of cephalosporins. **Conclusion:** The predominating bacterial pathogen in oral cavity were facultative anaerobes. There was equal gender predilection for the infection. The total species of microbes increased with respect to the study period. The findings in this study suggest that β-lactam antibiotics, mostly penicillins and cephalosporines, are still the mainstay in the antimicrobial management of orofacial infections.