

methods and feeble prepositions. We must assume that the contamination pathway keeps a capital role in the industrial area and *K. oxytoca* strains must be used prudently in order to avoid cross-contaminations of the chain product. Awareness of the value of predictive microbiology must be undertaken in this field jointly by microbiologists, mathematicians, chemists and biologists in order to focus on the factors that impose the highest microbiological risk and then effectively, preserving consumer health.

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40.008

Acute Bacterial Meningitis Among Children <5 Years of Age in Oman: A Retrospective Study During 2000–2005

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Background: During the last two decades, significant changes have taken place in the epidemiology of meningitis, especially due to the global availability and expanding use of Hib vaccines. The introduction of conjugate Hib vaccine in the Expanded Programme of Immunization (EPI) in Oman and recent availability of meningococcal vaccines against serogroups A and C plus the introduction of pneumococcal heptavalent conjugate vaccine are expected to influence the epidemiology of the disease in the country. We conducted this periodic review of acute bacterial meningitis in children less than five years of age in Oman from January 2000 to December 2005 to reflect changes in the epidemiological pattern of these pathogens.

Methods: Retrospective analysis of all cases of acute bacterial meningitis in children less than five years of age reported to the Department of Communicable Diseases Surveillance and Control, Ministry of Health, Oman.

Results: There were 344 cases of meningitis due to suspected bacterial etiologies reported in children less than 5 years of age. *Haemophilus influenzae* 76 (22%) was the most common pathogen identified, followed by *Streptococcus pneumoniae* 53 (15%) cases and *Neisseria meningitidis* 37 (11%) cases respectively. In one hundred seventy four (52%) cases of presumptive bacterial meningitis, the etiologic organism remains unidentified. The peak occurrence of meningitis was in young children less than one year old. The total male to female ratio was 1.4:1 and the case fatality rate (7deaths) was 2%.

Conclusion: With the introduction of Hib vaccine in Oman in October 2001, the absolute number of cases due to *Haemophilus influenzae* significantly declined over the years. The incidence of meningitis due to other pathogens like *S. pneumoniae* and *N. meningitidis* remains steady. There is significant need to improve laboratory methods of bacterial detection and identification, which will help to formulate better antibiotic policies and strengthen control measures through newly introduced vaccines in Oman.

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Bacteriologic Study of Diabetic Foot Ulcers

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Keywords: Diabetic foot; Infection; Bacteriologic; Susceptibility testing

Background: Foot infections are the most common problems in persons with diabetes. These individuals are predisposed to foot infections because of a compromised vascular supply secondary to diabetes. Both aerobic and anaerobic bacteria are responsible for infections, which most of them are resistant to antibiotics

Patients and Methods: In total 116 hospitalized and out-patients diabetic with foot infections were investigated. Deep tissue biopsies were inoculated into freshly prepared Thioglycollate broth medium. Bacterial agents were identified by conventional bacteriologic methods. Sensitivity tests were performed according to standard disc diffusion method of Kirby & Bauer.

Results: Clinical grading and bacteriological study of 116 patients with diabetic foot lesions revealed polymicrobial etiology in 63 (54.3%) and single etiology in 45 (38.8%) and 8 negative culture. Aerobic Gram-positive bacteria accounted for 42.25%. *Staphylococcus aureus* was the most frequent microorganism yielded (26.7%), and *Staphylococcus epidermidis* was regularly associated with the lesions (14.6%). Gram-negative rods accounted for 52.6%. *Escherichia coli* was the most predominant gram negative organism (24.1%). No anaerobes was isolated from the ulcers. All the microorganisms isolated showed high resistance to used antibiotics, amongst them, *Staphylococcus aureus* and *Pseudomonas aeruginosa* were the most resistant bacteria in present study.

Conclusion: *Staphylococcus aureus* was the most common cause of infection either alone or with other microorganisms with high resistance to antimicrobial (MRSA & VRSA) but sensitive to ciprofloxacin. *E. coli*, *Staphylococcus epidermidis* and *Proteus vulgaris* were the other common causes of diabetic foot infections in present study. And the rate of antibiotic resistance was 65% among the isolates. Due to polymicrobial infection and antibiotic resistance, surgical intervention aside with ciprofloxacin must be concerned.

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Important Marker of cagI and cagII in Helicobacter pylori Isolated from Dyspeptic Patients in Iran

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Background: The major *H. pylori* disease associated genetic factor is the whole cag pathogenicity island (PAI), including of 30 genes.