Letter to the Editor

Alkaligenes faecalis in incubator humidifiers

Respiratory infections play an important part in the problem of nosocomial infections (0.5-5% of hospital inpatients). Respirators, particularly those incorporating nebulizers, are a major potential source of nosocomial Gram-negative pneumonia (Sanford and Pierce, 1971). The probable mode of entry is fluid aspirated from the pharynx, a phenomenon known to occur during sleep in healthy people (Amberson, 1937).

Eight incubator humidifiers were examined. One humidifier was empty and dry, three contained tap water, and four contained water sterilized by autoclaving. Cultures were made in duplicate on horse blood agar plates and incubated overnight at 37°C and at room temperature. There was no growth from the dry incubator, but the other seven yielded a Gram-negative bacillus, which was identified as *Alkaligenes faecalis* because all isolates bore lateral flagella and produced catalase and oxidase; nitrogen was produced from nitrate under an agar plug. None fermented sugar (Cowan and Steel's method) or split glucose (Hugh and Leifson's method), fat (Tween 80 in Sierra's test) or protein (milk). A similar organism was isolated from the detergent, Teepol, used to clean the incubators. No infection has yet been found among the babies which could be attributed to the humidifiers, but the widespread pattern of antibiotic resistance in the isolates has made us even more aware of the need to eliminate the organism from the babies' environment.

Rubenstein and Fowler (1955) describe two outbreaks of salmonellosis in the newborn related to aerosols from contaminated water traps of resuscitators. Edmonson *et al* (1966) found in an air sample of nebulizer tents that 53% were heavily contaminated with *Pseudomonas* and 30% with *Alkaligenes faecalis*, and that 50% of particles when delivered to the mouth or nose are capable of entering the bronchial tree.

We have met the situation by autoclaving the Teepol in 150 ml bottles at 96.5 kPa (14 lb/sq in) for 15 min. One of these is added to 28 ml of bleach and 4.5 litres of tap water. This has led to the eradication of this potential nidus of infection.

References

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Book reviews

Modern Methods in Medical Microbiology. Systems and Trends. Edited by J. E. Prier, J. T. Bartola, and H. Friedman. (Pp xviii + 201; illustrated; £9.25.) Baltimore, London and Tokyo: University Park Press. 1976.

This is a multi-author record of a symposium held by the Eastern Pennsylvania Branch of the American Society for Microbiology. There are chapters on methods for the rapid identification of micro-organisms such as the various antigen detection techniques, immunofluorescence, kits for identification of Enterobacteriaceae, and culture methods applicable to anaerobic organisms. The contribution on immunological diagnosis of bacterial and fungal diseases condemns the Widal test and lists the kits regarded as suitable for detecting various infections. Some methods for rapid diagnosis of virus infections are dealt with briefly, and there is a detailed chapter on the diagnosis of infectious mononucleosis. The techniques for diagnosing autoimmune diseases and the application of radioimmunoassay and radiometric methods are briefly described. There is a useful chapter on the application of gas liquid chromatography to organism identification.

This book may be of use for readers without any experience of modern microbiological methods in so far as it provides a comprehensive list of techniques and their applications. The quality of the contributions varies, the descriptions are on the whole very superficial, and only occasionally is any practical detail or advice given. The practising microbiologist requiring to learn the essentials of any of the techniques described would do better to look elsewhere.

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Immunopathology of the Eye. By A. H. S. Rahi and A. Garner (Pp xii + 343; illustrated; £11.50.) Oxford, London, Edinburgh, Melbourne: Blackwell Scientific Publications. 1976.

The need for a work such as this has been very great: no longer can the subject be contained within isolated chapters in other volumes.

The structure of the book seems logical. Introductory chapters recall general principles and techniques; there follows a detailed description of immunopathologi-