The Association of Clinical Pathologists: 92nd general meeting

The 92nd general meeting was held at the University of Warwick, Coventry, from 3 to 5 April 1974. Abstracts of the scientific communications follow. The Guest Lecture was given by Dr C. F. Hawkins on 'Speaking at meetings'. Two symposia were held, one on 'Systemic manifestations of intravascular coagulation' (Chairman: Professor E. K. Blackburn), and the other on 'Jaundice' (Chairman: Professor G. H. Lathe).

Klebsiella aerogenes Infections in the Tropics

EVELYN FINNIE (*Public Health Laboratory, Coventry*) The purpose of this study was to assay the significance of the isolation of *Klebsiella* from the upper and lower respiratory tract in a group of Jamaican hospital patients.

An incidence of 13.5% of *Klebsiella aerogenes* isolation was encountered in a group of 200 persons showing evidence of upper respiratory tract infection compared to an isolation rate of 11.5% in a similar population showing no evidence of upper respiratory tract infection. Details of the biotypes and serotypes of *Klebsiella* isolated are considered.

In the lower respiratory tract an incidence of 19% isolation of *Klebsiella aerogenes* was encountered in a population sample of 200 cases showing evidence of respiratory tract infection ranging from acute bronchitis to lobar pneumonia and lung abscess formation and this was significantly greater than the control group showing an isolation rate of 10%. Thirty per cent of the *Klebsiella* isolates from 'normal' sputum and 38% from purulent sputum came from patients on antibiotics at the time of first isolation of *Klebsiella*.

No species of *Klebsiella* other than *Klebsiella aerogenes* was encountered during the period of this study. Considerable heterogeneity of biotype and serotype combination was found and no cases of cross infection were demonstrated.

Electron Microscopy of Faeces in Acute Gastroenteritis

T. H. FLEWETT, A. S. BRYDEN, AND HEATHER DAVIES (*Regional Virus Laboratory, East Birmingham Hospital, Birmingham*) Immunoelectron microscopy has been employed by Dr S. K. R. Clarke's group in

Bristol and Dr R. M. Chanock's group in Bethesda, Md, to detect parvovirus-like particles in faeces of infected volunteers. We thought it would be worthwhile to see what viral flora of faeces might be discernible by electron microscopy in acute gastroenteritis and other conditions. Suspensions of faeces in saline were clarified by centrifugation at 7000 rev/min for 30 min. The supernatants were centrifuged at 50 000 rev/min for one hour; the deposits were resuspended in a few drops of distilled water and examined in the electron microscope after negative staining. Fragments of bacterial cell walls and flagella were often seen.

Many different kinds of virus-like particles were observed. Many were obviously bacteriophages; the smaller particles might well have been of either human or bacterial origin. Two groups, adenoviruses and reovirus-like particles, were recognizable as being of human origin. Adenoviruses were seen in almost half the faeces from which they were isolated. The reovirus-like particles were found, often in great numbers, almost exclusively in faeces of young children and infants with acute gastroenteritis. The relationship of these viruses to the Reoviruses and Orbiviruses will be discussed, and attempts at isolation described.

Further Thoughts on Sulphonamide-trimethoprim Mixtures

R. W. LACEY, E. L. LEWIS, AND J. D. ANDERSON (*Department of Bacteriology, University of Bristol*) The exclusive use of trimethoprim with sulphamethoxazole in a single preparation has been justified on the following theoretical grounds: the prevention of resistance developing to the individual components, the increased therapeutic efficacy due to bacteriostatic

synergy between the components, and the bactericidal action attainable by the mixture only. The validity of each of these reasons is disputed. Since the introduction of trimethoprim/sulphamethoxazole preparations, the understanding of the origins of antibiotic resistance in general and of that to these agents in particular has increased. The infrequency with which trimethoprim resistance has appeared in sulphonamide-resistant organisms suggests that the use of trimethoprim alone would not provoke rapid development of resistance to it. Sulphamethoxazole and trimethoprim do not produce bacteriostatic synergy against most sulphonamide-resistant organisms in nutrient agar containing lysed blood. In broth, the bactericidal effect of the mixture appears to be nullified by the presence of minute amounts of thymidine. Despite inactivation of thymidine by the presence of lysed horse red cells, the majority of coliforms and *Proteus* spp are not destroyed in nutrient broth.

Effect of Urine from Individuals Receiving Either Co-trimoxazole or its Separate Components upon Urinary Gram-negative Bacteria

J. D. ANDERSON, M. A. SELLIN, AND R. W. LACEY (*Department of Bacteriology, University of Bristol*) Various authors have come to different conclusions on whether co-trimoxazole is predominantly bactericidal or bacteriostatic *in vitro*, and the extent to which its individual components (sulphamethoxazole and trimethoprim) are synergistic. Most arguments have centred on the efficiency of methods used to neutralize sulphonamide and trimethoprim inhibitors in laboratory media. The use of urine as a test medium avoids speculation on the clinical significance of tests with laboratory media.