

# The Association of Clinical Pathologists: 94th general meeting

The 94th general meeting was held at the University of Exeter from 9 to 11 April 1975. Abstracts of the scientific communications follow.

## Intravascular Coagulation in the Nervous System

W. R. TIMPERLEY AND F. E. PRESTON (*Departments of Neuropathology and Haematology, Royal Infirmary, Sheffield*) A series of cases is described in which there appears to be a causal relationship between an intracerebral lesion and disseminated intravascular coagulation (DIC). In some cases the intracerebral lesion may have induced the DIC, and in others the intracerebral lesion caused by the DIC in the course of another disease process appears seriously to have affected the outcome of that disease. Cases in which DIC may have been initiated by an intracranial lesion include head injury, cerebral tumour, and intracerebral abscess. Cases in which DIC resulted in pathological damage to the brain during the course of some disease process elsewhere include malignant hyperpyrexia, Crohn's disease, leukaemia, mucin-secreting adenocarcinoma of lung, carcinoma of prostate, a probable virus infection, acute pancreatitis, renal failure, septicaemia, perinephric abscess, and a pulmonary abscess complicating pneumoconiosis. In the latter case the cerebral symptoms closely mimicked a subdural haematoma. A series of patients dying in diabetic keto-acidotic coma is also reported in whom there was occlusion of medium-sized and small vessels in the brain and various other organs. Petechial haemorrhages, infarcts, ischaemic areas, and focal demyelination were seen around many of the affected vessels. One case developed signs of acute pituitary failure during an attack of diabetic keto-acidosis and at necropsy several weeks later, infarcts were seen in the pituitary gland and in other areas of the brain.

## Three Studies in Environmental Contamination in a Laboratory engaged in Salmonella Isolation

R. W. S. HARVEY AND T. H. PRICE (*Public*

*Health Laboratory, University Hospital of Wales, Heath Park, Cardiff*) Environmental contamination is important in salmonella epidemiology. It seemed worth investigating bacteriological aspects of a laboratory environment. In 1974, we examined well over 900 samples containing salmonellas. Inoculated enrichment and plating media are concentrated in certain areas of the laboratory. These were investigated. Materials examined were water in the 43°C water bath used for salmonella enrichment broths, water of syneresis (Collins, 1974) in petri-dishes containing agars on which salmonellas were growing and, lastly, portions of inspissated salmonella cultures dropped on the bench after flaming the inoculating loop.

In 1968, we became aware of contamination of water baths during a quality control exercise. Test material was salmonella-infected dried egg. Many false positive results were reported in this trial. Cross-contamination of samples was obviously involved, but the exact mechanism was doubtful. Subsequent investigation revealed that water in incubating baths became positive for salmonellas after cultures of egg powder had remained in them for 24 hours. Recently, we extended this study and examined water from baths after incubating enrichment cultures of sewage-polluted water. Of 510 bath samples, 55 contained salmonellas. Serotypes found corresponded to those in the polluted water specimens. The danger of cross-contamination of negative samples from incubation in the bath therefore existed. Ideally, material supporting bacterial growth should not come into contact with water containing micro-organisms (Aberdeen typhoid outbreak).

It is our practice to leave certain plates, after incubation, at room temperature for some days to improve colonial differentiation (Harvey and Price, 1974). In these circumstances, fluid is extruded from the agar. We examined this fluid

qualitatively and quantitatively. Salmonella counts ranged from 12 organisms/ml to 525 000/ml.

Finally, portions of inspissated salmonella colonies dropped on the bench from a flamed loop were cultured. We examined 257 samples. None contained viable salmonellas.

## References

- Collins, C. H. (1974). Prevention of laboratory acquired infection *In* Public Health Laboratory Service Monograph Series No. 6, p. 21. HMSO, London.  
Harvey, R. W. S. and Price, T. H. (1974). Isolation of salmonellas *In* Public Health Laboratory Service Monograph Series No. 8, p. 12. HMSO, London.

## Alcoholic Solutions and other Agents for Disinfection of the Surgeon's Hands

E. J. L. LOWBURY AND G. A. J. AYLIFFE (*MRC Burns Unit and Hospital Infection Research Laboratory, Birmingham Accident Hospital*) Repeated preoperative cleansing of the hands with detergent preparations containing antimicrobial agents (povidone iodine, hexachlorophane, chlorhexidine or Irgasan DP 300) reduced the microbial flora of the skin to a low equilibrium level at about 1% of the pre-treatment level; after a single standard two-minute handwash with a 4% chlorhexidine detergent preparation, skin samplings showed a reduction to about 13% of the pre-treatment level. Much larger reductions (of about 98% after one treatment and 99-99% after a series of treatments) were obtained by vigorous rubbing of 10 ml of 0.5% chlorhexidine in 95% ethanol into the hands, wrists, and forearms, allowing the solution to evaporate to dryness while rubbing. Slightly smaller effects were obtained by the use of 95% alcohol without added chlorhexidine. For repeated use, 1% glycerol was added to the alcoholic solution to prevent excessive drying of the skin. The use of 95% ethanol caused a much greater reduction