The Association of Clinical Pathologists: 95th general meeting

The 95th general meeting was held at Imperial College, London from 24 to 26 September 1975. Abstracts of most of the scientific communications and of some of the papers read at symposia on 'Thyrototoxicosis' (Chairman: Professor E. D. Williams), 'Immune complex diseases' (Chairman: Dr L. E. Glynn), and 'Preleukaemic states' (Chairman: Dr J. E. MacIver) follow.

A case of Paraquat poisoning

G. J. LAWS (*Department of Pathology, General Hospital, Hexham, Northumberland*) A case, originally diagnosed as pneumonia, was considered as Paraquat poisoning because of failure to respond to treatment. The patient at first made no mention of having consumed Paraquat, then denied it, but later admitted the possibility. Traces of the compound were detected in urine sampled 10 days after the presumed date of ingestion, and death occurred on the 23rd day from respiratory failure.

At necropsy, lung changes typical of the condition—haemorrhage and oedema, degeneration of the alveolar lining cells, hyaline membrane formation, interstitial fibrosis, bronchiolar proliferation, and dilated air spaces—were present.

The missed diagnosis of amoebiasis

W. P. STAMM (*Amoebiasis Diagnostic and Research Unit, St Giles' Hospital, London*) Amoebiasis is a cosmopolitan disease which can mimic most other abdominal or hepatic disorders. It is easily treatable and should for that reason have a high place in any list of differential diagnoses.

The advent of good serological tests and specific immunofluorescent staining of amoebae in tissues and pus have made diagnosis much easier when the proper facilities are available. Serum from all patients thought to have diseases such as ulcerative colitis, Crohn's disease, or abdominal or hepatic neoplasm should be tested for amoebiasis before surgical intervention or the giving of steroids.

Upwards of 200 patients are diagnosed annually in England and Wales as suffering from amoebiasis. An analysis of the hospital records of 30 patients who died of amoebiasis between 1963 and 1973 showed that on 12 of them the diagnosis was made

only at necropsy. An abdominal laparotomy was performed on six of the patients; on five of them the correct diagnosis was still not reached as a result of the operation, and on three of them the diagnosis was made *post mortem*. These figures suggest that the diagnosis of amoebiasis is missed in about 40% of patients with a lethal amoebic infection; the probability is that the proportion of missed diagnosis is even greater in patients with a milder type of infection.

In the hope of improving this sad situation the DHSS has supported the establishment of an amoebiasis diagnostic and research unit at St Giles' Hospital where advice and technical assistance are available.

Immune complex disease in vinyl chloride workers

A. MILFORD WARD (*Department of Immunology, Hallamshire Hospital Medical School, Sheffield*) The occurrence of Raynaud's phenomenon and loss of bone density in association with dermal thickening, the syndrome of acro-osteolysis (AOL), has been recognized in the vinyl chloride industry since the mid 1950s. Recent investigation has indicated that there is multisystem involvement in a widespread disease process. Immunological and immunochemical investigation of 52 workers from a single factory has revealed evidence of a chronic soluble complex disorder in 28 individuals. The features of the disorder include hyperimmunoglobulinaemia, cryoglobulinaemia, and cryofibrinogenaemia, and *in vivo* complement activation via the classical pathway with C4 and C3 conversion. There is, in addition, evidence of a reduced T-cell population and B-cell proliferation. Some patients also show low levels of various non-organ-specific anti-tissue antibodies.

Immunofluorescent examination of biopsy material from selected patients shows the presence of circulating immune complexes with deposition on vascular endothelium and incorporation into a subintimal proliferation which eventually constricts the vascular lumen.

The data available from immunological investigations permit the construction of a provisional model of the disease process. The circulating immune complexes together with complement activation and cryoprecipitation cause the observed vascular abnormalities, and thence the clinically observed abnormalities. The initiating sequence is still speculative but experimental metabolic data suggest that vinyl chloride metabolites may be incorporated into protein synthesis. The presence of structurally modified or antigenically foreign protein would be sufficient stimulus to initiate the observed reaction sequence.

The therapeutic use of plasmapheresis in an immune complex disease

T. J. HAMBLIN AND J. VERRIER JONES (*Royal Victoria Hospital, Bournemouth and Southmead Hospital, Bristol*) A 30-year-old man with active systemic lupus erythematosus characterized by circulating immune complexes was treated by intensive plasmapheresis. There was clinical improvement, and the circulating complexes became undetectable. Preliminary experience with this and other cases suggests that plasmapheresis is a useful procedure in active SLE when circulating immune complexes can be detected.

Laboratory diagnosis of hyperthyroidism

P. J. N. HOWORTH AND P. MARSDEN (*Departments of Chemical Pathology and Medicine, King's College Hospital Medical School, London SE5*) At present the most