

NOTES OF THE SYMPOSIUM ON HEPATITIS HELD BY THE ASSOCIATION
FOR THE STUDY OF INFECTIOUS DISEASE ON 4 DECEMBER 1970

Dr Ramsay, in welcoming members and visitors, explained the origin and aims of the Society and mentioned that the death of "fever hospitals" had enabled those specialising in "infectious disease" to expand the scope of their work beyond the notifiable conditions to which they were previously restricted. Although admissions to infectious disease units of measles and whooping cough remained minimal, the numbers of admissions as a whole were increasing. This symposium reflected the Society's wider interest in infectious conditions.

EPIDEMIOLOGY

DR J F SKONE - DEPUTY MOH, BRISTOL
INFECTIOUS HEPATITIS IN BRISTOL 1959 - 1970

An outbreak in a hospital for the mentally handicapped in 1959 was followed by a marked increase in the incidence of the disease in children in the next 2 years. The peak incidence of 148 in October 1960 was followed by a gradual tailing off but a further increase in incidence some 6 years later, coming to a peak in 1966, occurred. A third wave now appeared to be building up in 1970. In all, some 5000 cases were notified with 14 deaths. The disease appeared to spread from pools of infection particularly where there was an opportunity for contact eg families. There was no evidence of spread by immunisation or vaccination, school meals, food or water supplies. The incidence was not related to operations such as tonsillectomy, dental treatment, drugs or transfusion. Liver sequelae were minimal.

DR O RINGERTZ - STOCKHOLM
EPIDEMIOLOGICAL ASPECTS IN SWEDEN

The usual incidence of hepatitis in Sweden was about 1000 cases per year. This had risen tenfold during the war due, it was thought, to increased mobility of the population and to suspect water supplies. An outbreak occurred in 1955/6 with an incubation period averaging 29 days which was traced to eating oysters. More recently outbreaks with a longer incubation period had occurred in "track finders", cross country runners who were apt to scratch their legs severely and use rather primitive communal washing facilities afterwards. 600 such cases were reported over three years and one death was recorded. Subsequently an outbreak spread by drug addicts in 1966/7 accounted for 500 cases and it was now estimated that there

had been over 200 cases associated with haemodialysis units. It was considered that morbidity was higher in medical personnel, especially technicians, than among the general population.

DR S F SULLIVAN - LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE
VIRAL HEPATITIS AMONG DRUG ADDICTS

Drug addicts tended to share syringes and, if one member of a group had hepatitis, the remainder were likely to get it. Blood donated by addicts for transfusion gave a very high hepatitis rate in recipients. The Willowbrook study showed that virus B could be transmitted by blood ingested orally, and there was considerable evidence to suggest that long incubation hepatitis could be transmitted by other than the parenteral route though close contact was necessary.

AETIOLOGY

DR A J ZUCKERMAN - LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE
THE MULTIPLE AETIOLOGY OF VIRAL HEPATITIS

It was not possible to regard infective hepatitis and serum hepatitis as distinct types as there was a considerable overlap between them. It would be more correct to recognise short and long incubation types of infection, the short incubation type generally corresponding with infective hepatitis and the long incubation type with serum hepatitis. Australia antigen was associated with the long incubation type and other antigens associated with hepatitis, eg the Italian antigen and the faecal antigen were being discovered. In addition other viruses such as yellow fever and cytomegalovirus could cause hepatitis.

DR F O McCALLUM - DEPARTMENT OF VIROLOGY, OXFORD
A REVIEW OF THE PRESENT POSITION OF AUSTRALIA ANTIGEN

A general review of the situation was given and the types of antigen seen at electronmicroscopy were described. There was no evidence of transplacental transmission but a baby could be infected during delivery. There was also no evidence that the antibody was a protective one. The higher incidence of positive cases in Downs syndrome was discussed.

DR J D ALMEIDA - DEPARTMENT OF VIROLOGY, HAMMERSMITH
RECENT ADVANCES IN KNOWLEDGE OF THE ANTIGEN/HEPATITIS RELATIONSHIP

Serial electronmicroscopy findings were described which suggested three ways in which the host could react to the infection.

1. A repeated finding of only small quantities of unaggregated antigen. This occurred in people with good liver function who remained symptom free and who could be regarded as carriers. It was suggested that adequate antibody was available to keep antigen in check.
2. Serial findings showed increasing quantities of antigen present until symptoms of hepatitis presented, the antigen becoming aggregated and subsequently disappearing. It was suggested that this picture represented an antigen antibody reaction which could be the cause of the clinical illness.
3. Large amounts of aggregated antigen present, usually the tubular form predominating, in patients with abnormal liver function. It was suggested that antibody production was deficient in this group.

PREVENTION AND TREATMENT

DR D REID - GLASGOW

PREVENTION OF HEPATITIS WITH IMMUNOGLOBULIN

Experience in the US Army had shown immunoglobulin to be effective in preventing short incubation hepatitis. However, there was no evidence to show that long incubation hepatitis was significantly affected.

DR D KRICKLER - NORTH LONG POSTGRADUATE MEDICAL CENTRE
ACTIVITY AND HEPATITIS

There was some evidence to suggest that early return to activity delayed convalescence particularly in those with a bilirubin of more than 3 mgms%. Of 5 patients who undertook strenuous exercise at the onset of the disease, 3 died.

✓ PROF S SHERLOCK - ROYAL FREE HOSPITAL

THE TREATMENT OF LIVER FAILURE

The treatment of fulminating hepatocellular failure was discussed and the following points made:-

1. Exclude chronic liver disease.
2. Watch for danger signals
 - (a) Change of personality
 - (b) Feter
 - (c) Shrinking of liver
 - (d) Slowing of EEG.
3. Need for ample glucose without over infusing.
4. Avoid paraldehyde and morphine.
5. Corticosteroids not thought to help.

Of 20 patients treated by exchange blood transfusions, 2 survived.

Of 5 patients treated by pig liver perfusion, 2 survived.

PROF R Y CALNE - CAMBRIDGE

DR R WILLIAMS - KINGS COLLEGE HOSPITAL

LIVER TRANSPLANTATION

In the treatment of hepatic failure, if the liver did not regenerate, transplantation might be indicated. Of some 20 transplants, three were surviving, one for 21 months, one for 4 months and one for 2 months. The problem of transplantation of antigen positive patients arose. Precautions necessary for the general care of hepatitis patients were queried and Prof Sherlock stated she had always understood that it was safe to nurse patients in open wards but she would like to be reassured on this point. No such reassurance was forthcoming, but it was suggested that nursery staff should have a period of training in infectious disease units.

HEPATITIS IN DIALYSIS UNITS

DR R FINN - LIVERPOOL

HAEMODIALYSIS ASSOCIATED HEPATITIS IN LIVERPOOL

A total of 57 cases were reported during the period 1966-70. 16 patients, 33 staff and 8 relatives were involved, no deaths had occurred. The blood of infected renal

failure patients tended to remain highly infective over long periods, one patient remained antigen positive four years after being infected. 7 antigen positive patients remained on home dialysis and were excluded from the unit being treated in isolation if they had to return to hospital.

In the speaker's view, it was unethical to expose young nursing staff to a known risk of infection and if preventive measures could not reduce this risk to an acceptable level, there was a case for reducing the extent to which dialysis should be carried out. He advocated:-

1. Screening of new patients.
2. Reduction of transfusion to a minimum and using only biologically safe blood ie from a donor whose blood had been used on at least five occasions without causing complications as well as being antigen tested before use.
3. Reduction in the size of dialysis units.
4. A strict code of practice designed to protect staff.

It was thought that the virus could be non toxic, liver damage being caused by antigen/antibody reaction. It seemed logical therefore to give steroids early in the treatment of the disease.

DR S POLAKOFF - PHLS, LONDON

PREVENTION OF HEPATITIS IN DIALYSIS UNITS

A study begun in 1968 to assess the value of immunoglobulin in the prevention of hepatitis in dialysis units and to establish the incidence of the disease was reported. The results gave little further information until antigen testing was introduced. Of the units included in the study, four were found to have antigen positive patients and all four had outbreaks of hepatitis. More recently, antigen testing had revealed potential outbreaks in three other units.

In discussion, Prof Marmion stressed the importance of preventive measures, only two members of the staff being involved in the outbreak at the Edinburgh dialysis unit. He thought that staff given immunoglobulin tended to have the disease less severely. He considered that more sensitive testing was needed and that antigen negative donor panels were meaningless. A positive patient should be clearly identified so that all departments of the hospital would be aware of the infective risk.

Dr Stevenson suggested that all positive cases should carry a card explaining the risk.

Dr Finn pointed out that there were many positives in the population and it was necessary to keep the problem in perspective.

The proceedings will be published in a special issue of the Post-Graduate Medical Journal.

J R ASCOTT