A CASE OF WEIL'S DISEASE

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SUMMARY: A 20 year old patient who survived severe jaundice and renal failure due to Weil's Disease is reported. This condition is rare in the United Kingdom and in Germany.

Case report

A 20 year old soldier was admitted to the British Military Hospital, Rinteln on 14 July, 1975. Twelve days before he had fallen into a German river, becoming unwell five days later, with nausea, vomiting and fever. During the next three days he developed headache and generalised myalgia. He was noted to be jaundiced two days before admission. On 13 July he began to have pains in both testes, central chest pain and a dry cough. When admitted he was feverish, deeply jaundiced and very dehydrated, with conjunctival suffusion. His liver and spleen were enlarged and his thigh muscles tender.

Investigations


Treatment and progress

A total of 6000 ml of fluid was given intravenously during the first 24 hours, during which period he passed 1250 ml of urine. In the second day he was given 3000 ml intravenously and 2000 ml by mouth. He was able to take large amounts of fluid orally thereafter. By the second hospital day he was afebrile and clinically much improved. His blood urea fell steadily, day by day, though it took four weeks to reach normal levels. On the fourth day, however, his serum bilirubin rose to 892 mmol/l (52 mg/100ml). The day after that he developed a generalised maculopapular rash with petechiae and a recurrence of fever. Intramuscular ampicillin 250 mg six hourly was begun after blood cultures had been taken (these were negative). The rash began fading and his pyrexia subsided in 24 hours. He made a steady recovery after this and ampicillin was given orally for a week. It took five weeks for his serum bilirubin to become normal. By then he was fit to go on sick leave. Six weeks later he was easily tired but otherwise well, with normal biochemistry.

*This level is anomalously normal in a man with overt liver disease. The author states that the level rose to 17.5 K.A. units/ml during the recovery phase—Ed.
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Serology

Serological tests were carried out at the Royal Army Medical College and Public Health Laboratory Service, Leptospirosis Reference Laboratory. Results were:

- Microscopic Agglutination Test on 9 August, 1975: positive to Leptospira icterohaemorrhagiae to titre 1/1000 to 1/2000.

Discussion

The clinical features in this case were typical of the "hepato-renal syndrome" of Weil's disease (Christie 1974) and serology confirmed infection by Leptospira icterohaemorrhagiae. It is likely that the patient contracted the infection during immersion in river water polluted by rat urine, since he did not have any other known contact with rats.

The efficacy of antibiotics in leptospirosis is doubtful unless given as soon as the first symptoms appear (Christie 1974) and the ampicillin administered from the 12th day of the illness was unlikely to have influenced recovery. Intensive, early rehydration, however, may have averted more severe renal failure, which is the commonest cause of death in Weil's disease (Christie 1974).

Leptospiral infections were common among British Troops serving in Malaya (Mackay-Dick and Robinson 1957) but are seldom seen in our military hospitals in Europe. In Landkreis Hameln-Pyrmont (in Lower Saxony) where the patient lived, only two cases of leptospirosis have been reported in 20 years, one being Weil's Disease (Schrabback 1975). In the whole Federal Republic of Germany in the years 1970 to 1975, between 46 and 71 cases of leptospirosis have been reported annually, less than half being classified as Weil's Disease (Pohn 1976). In the United Kingdom between 50 and 60 cases are notified each year, about one third being Weil's Disease (British Medical Journal 1973, 1974). In both countries, therefore, the reported incidence of Weil's Disease is about one case per 2,000,000 population per annum, making it a very uncommon disorder.

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