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CLINICAL FEATURES AND MANAGEMENT OF LEPTOSPIROSIS IN MALAYSIA

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Summary

Leptospirosis is an important cause of fever in Malaysia. The clinical features of 78 cases are described and illustrate the lack of specificity of the clinical syndrome. The timing of presentation and the success and safety of single dose doxycycline therapy make this treatment the sine qua none of early management.

INTRODUCTION

The textbook descriptions of leptospirosis are usually of Weil's disease – a severe form of leptospirosis with an appreciable mortality and caused mainly by Leptospira icterohaemorrhagica.

The leptospires are universal in their geographic distribution but more common in the tropics and sub-tropics. There are a multitude of species – usually identified by sero-typing – some of which are pathogenic for animals, some for man, some for both and many for neither. On the whole it is true to say that those that are a cause of morbidity in man are maintained in wild animals (usually rodents) and infect man via contaminated water. The portal of entry can be by ingestion but is more often a direct entry through the skin, presumably through areas where the integrity of the integument is compromised, albeit minutely.

Using previously published figures(1) an antibody reversion rate of about 42% per annum (p.a.) is indicated. From this and figures of antibody prevalence from the same source it is estimated that the population of West Malaysia suffers an annual attack rate of about 5%. Though the ratio between silent infection and disease is entirely unknown, the infection is obviously a potentially serious cause of morbidity, possibly of mortality and certainly causes substantial use of health care resources.

MATERIALS AND METHODS

Patients were selected from computer records of fever cases presenting at study centres in rural Pahang, details of which are being reported elsewhere(2).

The diagnosis of leptospirosis was made by the following findings of the leptospirosis SEL test(3): fourfold rise in titre to a minimum titre of 1:200 or, in the absence of an alternative diagnosis, a single titre of 1:400. Isolation of the organism from body fluids was not attempted.

Comparison of clinical features is descriptive without use of statistical tests.

RESULTS

78 patients were identified as having leptospirosis, 15.4% of these presented at rural health centres and 84.6% at hospitals. Presentation occurred at a mean of 5.2 days illness (range 1–30 days), with 68.8% presenting on the fifth day of illness or earlier.

The frequency of various symptoms is shown at Table I and of signs at Table II.

Ancillary ward and laboratory tests were found to be not helpful.

DISCUSSION

It is apparent that the clinical features of leptospirosis in Malaysia are not helpful in reaching a diagnosis, and may indeed be misleading. Laboratory diagnostic methods are specific and sensitive but too slow to be of any use to the clinician who requires a guide before treating his cases. The disease thus conforms to the expectations generated by other descriptions of the non-specificity of clinical pictures in febrile illness in Malaysia(4–6).

There is considerable doubt whether or not antibiotic therapy is efficacious for leptospirosis but it is clear that any benefit can only be conferred by treatment on the fifth day or

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TABLE I

Symptoms	%
Fever	100.0
Chills	88.5
Rigors	82.1
Headache	75.6
Muscle pain	66.7
Back pain	57.7
Cough	48.7
Vomiting	47.4
Abdo pain	29.5
Chest pain	21.8
Sputum	20.5
Retro-bulbar pain	11.5
Diarrhoea	10.3
Photophobia	6.4
Dysuria	6.4
Rash	1.3

TABLE II

Signs	%
Pharyngitis	34.6
Abdo tenderness	21.8
Conj. injection	17.9
Glands enlarged	17.9
Spleen enlarged	17.9
Liver enlarged	14.1
*Eschar	9.0
Anaemia	5.1
Deafness	5.1
Rash	5.1
Jaundice	3.8
Chest signs	3.8
Meningism	3.8
Cerebral irritation	2.6
Heart signs	2.6
Cyanosis	0
Other signs	12.8

*(3.8% with scrub typhus)

earlier(7). Malaysian patients seem to present early for this condition – probably a reflection of its subjective severity – and this provided an opportunity to study the chemotherapy of the disease. Previous studies of single dose treatment of scrub typhus with oral doxycycline(8) also indicated that the treatment was possibly efficacious and certainly harmless for leptospirosis. As the two diseases account for about 40% of fever cases at our study sites, the case for early single dose oral therapy with doxycycline on admission becomes very strong.

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