

CONSIDERATIONS ON THE NEW EPIDEMIC OUTBREAK OF HUMAN
LEPTOSPIROSIS IN GREATER RECIFE, BRAZIL, IN 1975*

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SUMMARY

A brief report was presented on a new outbreak of leptospirosis among the population of Greater Recife in 1975 in the wake of the floods that struck the city and its survivors in July of that year. A total of 107 cases were recorded, of which 105 were identified by seroagglutination and 2 by hemoculture. Once again the serotype icterohaemorrhagiae was the predominant etiological agent, having been found in 55 cases, followed by ballum in 18, grippotyphosa in 9, and pyrogenes in 8 cases.

INTRODUCTION

In July 1975 Recife was once again visited by catastrophic floods, which sent large numbers of people with high fever, muscular pains, jaundice torpor, and other symptoms into the hospitals of Greater Recife, one of them the Oswaldo Cruz Clinics Hospital, of the Faculty of Medical Sciences at the University of Pernambuco. Many agglutination reactions and hemocultures were

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requested for the diagnosis of leptospirosis. A large number of positive serological reactions signaled a new epidemic outbreak, which prompted us to make the present study. This outbreak was without doubt a recurrence of the epidemics of 1966 and 1970 reported by AZEVEDO & CORRÊA¹ and by CORRÊA et al.². The findings on those events are summarized in table 1, to which we add that eight strains of L. icterohaemorrhagiae and one of L. grippotyphosa were isolated by hemoculture in 1970

MATERIALS AND METHODS

Sera were examined from 435 patients in the Oswaldo Cruz Hospital and other hospital units of Greater Recife. The specimens of these sera were used to perform agglutination-lysis tests with Semarang Patoc 1, with a diagnostic titre of at least 1:200. The sera of the positive specimens were used for agglutinations with 20 different serotypes, those with a titre of at least 1:200 being considered positive. The antigens used were live cultures in Stuart's medium, as enumerated in table 2. The hemocultures were grown in Fletcher's medium.

TABLE 1

Number and peak titres of serum agglutinins obtained from blood samples taken during the epidemic outbreaks of leptospirosis at Recife, Pernambuco, in 1966 and 1970

Titre	Number of samples by serotype						
	1966				1970		
	icterohaemorrhagiae	pomona	andamana	australis	icterohaemorrhagiae	canicola	grippotyphosa
1:100	19	-	-	4	-	-	-
1:200	18	-	1	-	5	-	1
1:400	27	1	1*	1*	2	2	1**
1:800	27	-	-	1*	8	1	1
1:1,600	27	-	-	1*	7	2	-
1:3,200	38	1	1	-	6	-	-
1:6,400	14	1	-	1	23	-	-
1:12,800	-	-	-	-	10***	-	2
1:25,600	-	-	-	-	11	-	-
1:51,200	-	-	-	-	15	1	-
1:102,400	-	-	-	-	1	-	-
Total	170	3	2	5	88	6	5

* Coagglutination with icterohaemorrhagiae at same titre.

** Idem with bataviae.

*** Idem with canicola.

RESULTS AND DISCUSSION

Of 435 seroagglutinations performed, 105 or 23.2 per cent were positive at titres ranging between 1:200 and 1:12,800 for the various leptospira serotypes, as shown in table 3.

Yet again L. icterohaemorrhagiae is found to be the predominant serotype as the etiological agent in 55 cases (52.4 per cent), followed by L. ballum with 18 cases (17.1 per cent), L. grippityphosa with nine cases (8.5 per cent), L. pyrogenes with eight cases (7.6 per cent), L. andamana with four cases (3.8 per cent), L. canicola with three cases (2.8 per cent), L. cynopteri with three cases (2.8 per cent), L. panama with two cases (1.9 per cent), and L. pomona, tarassovi and autumnalis with one case each (0.9 per cent each). A total of 72 hemocultures were grown, the two positives having been identified by Prof. C. A. Santa Rosa as belonging to the serotype L. icterohaemorrhagiae. Of over 500 cases, only 105 were diagnosed by us, and the others in other bacteriological laboratories.

The flood of 1975 was the greatest ever recorded in the history of Recife, about 80 per cent of which was inundated, in some areas the waters reaching a height of 2.5 to 3.0 m. Rainfall in the middle reaches of the Capibaribe river reached 120 mm/hr, and 530 mm in a 24-hour period, according to data supplied by the Pernambuco Civil Defense Commission.

We also found that coagglutination took place in innumerable serological reactions, as had already been observed in previous studies. For us, however, the etiological agent is the highest serotype with the highest titre.