A NEW SALMONELLA SEROTYPE:
SALMONELLA SP. SER. HERZLIYA = 11:y:e,n,x

S. Toma, G. Altmann, Ch. B. Gerichter and I. Sechter

Government Central Laboratories, National Salmonella
Centre, Ministry of Health, Jerusalem, and Department of
Bacteriology, Tel-Hashomer Government Hospital, Israel

ABSTRACT. A new serotype, Salmonella sp. ser.
herzliya, was isolated from the intestinal
content of a snake. Its antigenic structure
is: 11:y:e,n,x.

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A new Salmonella serotype was isolated from the intestinal contents of a snake (Vipera xanthina).

The biochemical behaviour of the culture was as follows: no fermentation of adonitol, lactose, salicin, sucrose, maltose or raffinose. The β -galactosidase test was negative after 2 days, but weakly positive after 3-4 days. Rapid fermentation of arabinose, glucose (with gas), mannitol (with gas), sorbitol, rhamnose, trehalose and xylose. Dulcitol was fermented after 2 days and inositol after 10 days. Urea was not decomposed, indol was not produced and gelatine was not liquefied (Kohn-Lautrop's method). The reaction in phenylalanine medium was negative. The reaction in Stern's glycerol fuchsin broth was positive after 2 days, and H_2S was produced. It did not grow on Simmons' citrate agar; nitrates were reduced, the Voges-Proskauer reaction was negative, and the methyl red reaction was positive. Slowly positive reaction in d-tartrate, l-tartrate, i-tartrate and citrate, positive reaction in mucate and malonate. No growth was obtained in KCN medium. The culture produced lysine, arginine (2-3 days) and ornithine decarboxylases, but no glutamic acid decarboxylase.

According to this biochemical behaviour the strain belongs to Salmonella subgenus I, although it has some peculiarities: positive reaction in malonate, no fermentation of maltose, no growth on Simmons' citrate agar.

The strain reacted in the slide agglutination test with the serum 11 (S. tel-hashomer) and also with the polyvalent

OE serum (3, 10; 3, 15). In test tube, the boiled culture was agglutinated up to the titer 1/1280 by the O 11 serum prepared with S. tel-hashomer. It also showed agglutination at low titer (1/80) with the polyvalent OE serum (titer 1/2500). The O serum prepared with S. herzliya (titer 1/10,000) showed relatively high co-agglutination with S. newington (1/2560) and S. london (1/1280). Using a polyvalent OE serum absorbed with S. aberdeen (O 11), the strain was not agglutinated by this absorbed OE serum. Similarly, the O serum of S. herzliya, absorbed with S. london and S. newington, agglutinated only the O 11 strains (S. tel-hashomer, S. aberdeen) but neither S. london nor S. newington. By cross absorption test it was demonstrated that the O 11 antigen of S. herzliya is identical with the O 11 antigen of S. aberdeen.

The H antigen of S. herzliya phase 1 (y) was found, by cross absorption test, to be identical with the y antigen of S. madelia, and the H antigen of S. herzliya phase 2 was found to contain both the single factors x and z₁₆. It is noteworthy that, according to the findings of R. Rohde (1965), the presence of the pure x factor in a Salmonella strain is typical for the members of subgenus I. Therefore we consider S. herzliya as belonging to subgenus I, irrespective of the positive malonate test.

The antigenic structure of S. herzliya has been confirmed by Dr. R. Rohde, Hygienisches Institut, Hamburg, and Dr. Le Minor, Chief, International Salmonella Centre, Paris.

REFERENCE

- Rohde, R. 1965. The identification, epidemiology and pathogenicity of the Salmonellae of subgenus II. J. Appl. Bacteriol. 28:3.