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STUDIES ON *YERSINIA ENTEROCOLITICA* IN STRAY DOGS

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The present studies were done to determine the presence of *Yersinia enterocolitica* in dogs. From August 1974 to August 1975, the contents of the ileum, cecum, colon, rectum, and the mesenteric lymph nodes of 451 stray dogs in Sapporo were offered to examine the presence of *Y. enterocolitica*.

The results obtained were as follows:

1) From 25 out of 451 dogs examined, 395 strains of *Y. enterocolitica* were isolated. O-group strains isolated from 1 dog were the same in 24 of the 25 *Y. enterocolitica* positive dogs. *Y. enterocolitica* of O-group (O:) 3 biotype 4 was isolated from 15 dogs; O:5B biotype 2, from 5 dogs; O:5A biotype 1, from 2 dogs; and O:6 biotype 1 or O:9 biotype 2, from 1 dog. From only 1 dog, both O:3 and O:9 were isolated at the same time; recording of the O:9 strains is the first to be made in Japan.

2) *Y. enterocolitica* was isolated from 9 dogs in both direct and enrichment cultures, and from 16 dogs in the enrichment culture only.

3) The O-group strains isolated from more than 3 regions in one dog were O:3, O:5B or O:9. *Y. enterocolitica* of O:5A or O:6 was isolated from only 1 region in one dog. The rate of *Y. enterocolitica* positive specimens was minimum in the mesenteric lymph nodes in both the direct and enrichment cultures. Among the 4 regions of the intestinal tract, the rates of positive specimens were almost the same.

4) There were no significant differences in seasonal incidences of *Y. enterocolitica* positive dogs ($P < 0.05$). There was no detectable difference in the *Y. enterocolitica* positive rate between male and female dogs. From 5 months and over dogs, the strains of O:3 and O:5B were isolated, while from dogs of below 5 months, the strains of O:3, 5A, 5B, 6 and 9 were isolated.

The strains of O:3 and O:9, which are known to be pathogenic agents in man, were isolated from dogs in high frequency (17/25), and from all 5 regions in 4 dogs. Since dogs are closely connected to man as pets, it is presumed that some dogs may be sources of *Y. enterocolitica* infection in man.