

Brief Communication

YERSINIA ENTEROCOLITICA TYPE 2 ASSOCIATED WITH
DISEASE IN GOAT

During recent years *Yersinia enterocolitica* has received increasing interest, especially in human medicine. This has been due mainly to the isolation of the organism in connection with various intestinal disorders, such as acute ileitis and appendicitis (Niléhn 1969, Lassen 1972).

The organism has most often been isolated from animals, particularly chinchilla (Knapp & Thal 1963), and in a few cases from pig, hare, dog, horse, cow and sheep (Langford 1972). No reports of the isolation of *Yersinia enterocolitica* from goat have been found. The organism has not previously been isolated from animals in Norway (Lassen).

In the following, the isolation of *Yersinia enterocolitica* from an outbreak of disease in a goat herd in Norway is reported.

The herd, initially consisting of 161 animals (95 adult and 66 kids), was placed in two separate rooms. The animals were used in a feeding experiment in which the fodder during winter time consisted of ensilage and feed concentrate.

Over a period of three months during the winter and spring of 1972, 49 animals out of the 100 in one room became ill. Of these 49 animals, 32 were kids. Nineteen died during the period, 14 of these were kids. Some died suddenly without any previous clinical symptoms, while others showed diarrhoea, usually for a short time. Necropsy was performed on 16 of the animals, and from these an acute catarrhal enteritis was found in 13.

Bacteriological examinations of the intestinal contents from three of these animals revealed that *Yersinia enterocolitica* type 2, identified according to the serological scheme of Winblad (1967), predominated. From some of the other animals a small number of *Clostridium perfringens* was found. Otherwise, the main organisms isolated from the intestines were *Escherichia coli*, α -haemolytic streptococci and *Lactobacillus* sp. From the other organs no specific bacteria were isolated. The animals from which *Yersinia enterocolitica* was isolated had not been treated, while most of the others had been treated by chemotherapy or antibiotics.

From five out of 10 kids which had recovered from a previous period of diarrhoea *Yersinia enterocolitica* type 2 was isolated from the faeces (Table 1). Agglutinating antibodies against the bacterium were found in the blood serum of nine of these 10 animals, with titres of 1/40 to 1/640 (Table 1).

Table 1. Serological and bacteriological examinations of samples from 10 goats (kids) with previous diarrhoea, with respect to *Yersinia enterocolitica*.

Goat no.	Agglutinating antibodies against <i>Yersinia enterocolitica</i> type 2 (Widal, Titre)	Isolation of <i>Yersinia enterocolitica</i> type 2 from faeces *
1	1/160	+
2	1/160	—
3	1/640	+
4	1/40	+
5	—	—
6	1/640	+
7	1/80	—
8	1/40	+
9	1/640	—
10	1/320	—

* + *Yersinia enterocolitica* isolated.

— *Yersinia enterocolitica* not isolated.

Some of the persons who had been in daily contact with the goats during the spring had also suffered from diarrhoea. From one of these persons, who one week previously had diarrhoea and abdominal pain, agglutinating antibodies against *Yersinia enterocolitica* type 2 were found in serum dilutions of up to 1/1250. The organism could not be isolated from the faeces of this patient. Treatment by chemotherapy, however, was started before the faeces sample was taken.

The difficulty in isolating *Yersinia* from faeces must be emphasized, due to the slower growth of these organisms as compared to some of the naturally occurring bacteria in the intestines. In the present investigations, the bacteriological diagnosis was also hampered by the use of drugs on many of the animals.

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