

YERSINIOSIS - CLINICAL ASPECTS

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INTRODUCTION:

Since the late 1970's Yersiniosis has emerged as a serious disease of deer. The disease is generally associated with Yersinia pseudotuberculosis (Y.ps).

This paper is a summary of some of the clinical aspects as seen through examination of the computerised records of cases seen at Animal Health Division (AHD) Laboratories in New Zealand and summarised in AHD Laboratory Information System (LIS) Disease Surveillance Information for deer and from deer farmers in the Mid and South Canterbury areas (1980-83).

DETAILED STUDY

Information detailing all deer submissions to AHD Laboratories during the period 1 January 1979 to 31 December 1983 when analysed highlight the emerging importance of this disease in farmed deer.

When the three categories Yersinia, Y.ps and Yersinia enterocolitica (Y.e) are combined and compared with other Laboratory diagnoses of deer the importance is further underlined. (The majority of the cases were Y.ps).

TABLE 1

AHD Laboratory Diagnoses for period 1 January 1979 to 31 December 1983. Submissions from deer.

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
Total Diagnoses	348	600	549	401	517
Not Diagnosed	757	905	1388	1185	958
Total Cases	1105	1505	1937	1586	1475
Yersinia Diagnosed	73	73	84	68	114
% Total Cases	6.6	4.8	4.3	4.3	7.7
% Diagnosed Cases	28.7	12.2	15.3	16.9	22.0
Ranking with all Conditions	1st equal	3rd	3rd	3rd	1st equal

A further summary of the diagnosis Y.ps also demonstrates the differences in sex and age differences.

Refer Table II.

TABLE II

AHD Laboratory Information System for period 1 January 1979 to 31 December 1983 for diagnosis Y.pseudotuberculosis.

	<u>South Island</u>	<u>North Island</u>	<u>New Zealand</u>
Number of cases	164	171	335
SEX			
Male	76 (49.3)	62 (41.3)	138 (45.5%)
Female	78 (50.7)	88 (58.7)	166 (54.6%)
Unknown	10 -	21 -	31 -
AGE			
0-1 yo	73 (52.8)	96 (65.6)	169 (59.3)
1-2	30 (21.7)	29 (19.7)	59 (20.7)
2-3	15 (10.9)	9 (6.1)	24 (8.4)
3-4	7 (5.1)	5 (3.3)	12 (4.2)
4-5	9 (6.5)	3 (2)	12 (4.2)
5 +	4 (2.9)	5 (3.3)	9 (3.2)
Unknown	25 -	25 -	50 -

CLINICAL HISTORY:

An examination of the LIS for 1979-83 shows that there are two main clinical histories seen by practitioners in the field. Diarrhoea/dysentery is the most frequently reported clinical sign (47.6%) of all cases, this is followed by sudden death (34%) and others (18.4%). Typically the deer is in poor body condition and has commonly been subjected to stress eg transport or nutritional.

GROSS PATHOLOGY

The main finding is a moderate to severe haemorrhagic gastroenteritis. The ileum, caecum and colon being the most severely affected. Intestinal contents are usually very fluid and blood stained. In some cases the intestine wall may be thickened and a fibrinonecrotic pseudomembrane covering the mucosal surface. The mesenteric lymph nodes are enlarged, oedematous and haemorrhagic. Other body organs may be congested.

DISCUSSION:

From Table II it can be seen that it is a disease more frequently seen in younger deer, 59.3% of the Laboratory cases were in the 0-1 yo category with a further 20.7% in the 1-2 yo category. The 0-2 yo's accounting for 80% of all cases reported to AHD Laboratories.

The disease and clinical picture as described in earlier reports Beatson, Hutton and Hunter (pers comm) has changed very little.

It is useful for differential diagnosis of this disease to remember that it is frequently seen in the 0-2 yo age groups and is often seen following some form of stress. The disease is most frequently confused with malignant catarrhal fever (MCF), However with an accurate history and clinical picture the differentiation should be possible in the field.

The diagnosis of Yersiniosis from the Laboratory information given here may be inaccurate because a positive culture in the Laboratory does not always equate with the disease in the field. Therefore in some cases, the statistical information given in this paper may be slightly misleading.

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