

## LETTER TO THE EDITOR

### Braxy or Bradsot-like Abomasitis Caused by *Clostridium septicum* in a Calf

DEAR SIR:

Braxy (Bradsot) is a disease entity that is characterized by severe abomasitis in weaned to yearling sheep. *Clostridium septicum*, a gram-positive spore producing rod, is generally regarded as the etiology of this condition (1). The purpose of this letter is to present findings and laboratory results that support the presence of this disease entity in a bovine calf.

In April 1985, a six week old, male Simmental calf from a herd of 150 calves was presented with depression, dehydration and abdominal distension. Antibiotic and fluid therapy were unsuccessful and the calf died later on the day of treatment.

Necropsy revealed a normally positioned but markedly distended

abomasum that contained approximately 12 to 15 liters of putrid fluid. The abomasal wall was thickened and appeared intensely hemorrhagic and necrotic. The liver was pale yellow and the carcass was dehydrated.

Histologically, there was severe, acute, purulent, transmural abomasitis. The lesion was characterized by marked submucosal edema and vascular congestion with numerous neutrophils infiltrating the mucosa, submucosa and the muscular layers (Figure 1). Microscopic examination of other tissues did not reveal significant lesions.

Immunofluorescent antibody techniques on frozen sections of abomasum demonstrated an almost pure population of *septicum* and occasional *sordellii* organisms in the tissue. Similar techniques for other clostridial organisms yielded negative results. Routine microbiological cultures for other pathogenic organisms were negative. Results of

fluorescent antibody and viral isolation procedures for bovine viruses were also negative. These findings support a diagnosis of *C. septicum*-induced abomasitis.

Reports of this condition in calves are rare (2). Reports of a similar problem in sheep in the United States are similarly uncommon but are more common and, prior to development of vaccines (1,3), used to be of considerable economic concern in the United Kingdom. The condition in sheep is called braxy or bradsot and the gross and histological lesions are similar to those seen in the calf of this report.

In sheep, the disease is reported to occur in late fall or winter and is presumed to be due to *C. septicum* contamination of minute wounds in the rumen or abomasum as the result of the consumption of frozen grass or roots (1,3). However, as in the present case, previously reported cases of braxy in the United States (one involved sheep and the other a calf) occurred in April (1). In the present case, this was the only death from this cause to occur in the herd.

In sheep, no treatment other than prophylactic vaccination has been reported (1). The unsuccessful treatment in the case reported here suggested another similarity in the disease in both species.

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#### References

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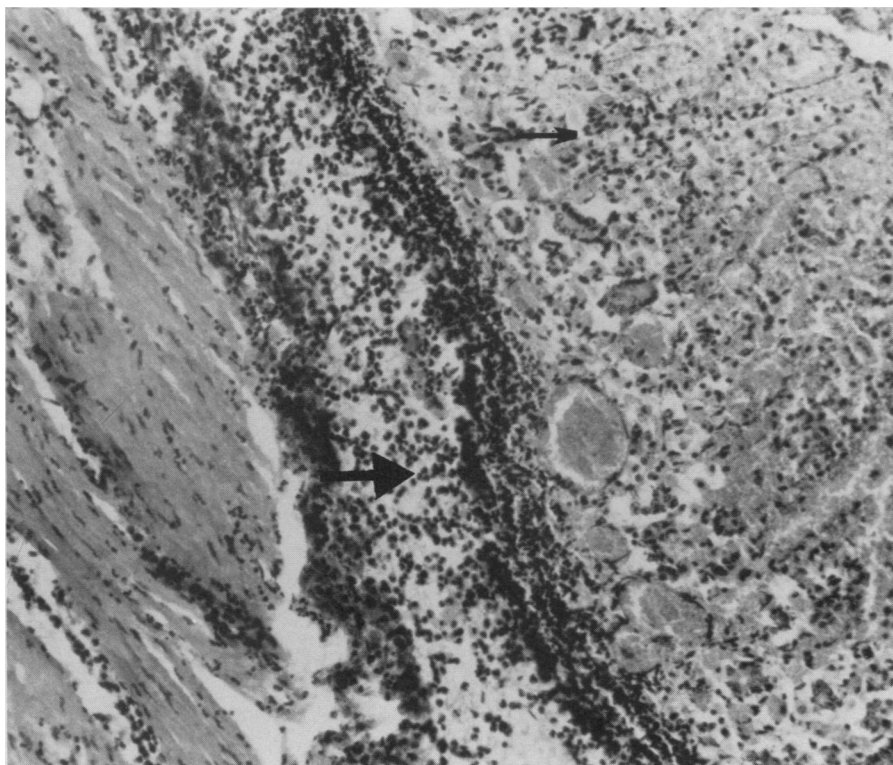


FIGURE 1. Photomicrograph of abomasum from calf; necrotic mucosa (thin arrow) is overlying edematous submucosa (thick arrow) that is bounded by thick linear bands of neutrophils. H & E. X100.