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genital tract is a common treatment. Infusion of caustics have also been reported to be beneficial. Use of artificial insemination (AI) may decrease spread among cows. Care should be taken with AI to prevent the transfer of organisms from the lower genital tract into the uterus.

Since mycoplasma-associated pneumonias usually involve other pathogens, treatments must be directed at the spectrum of potential etiologic agents. Management changes to minimize stress factors associated with pneumonia are also important. Antibiotics that act on cell walls, commonly used for treatment of respiratory diseases, will not affect mycoplasmas. Early recognition and treatment of respiratory-related problems minimizes the development of otitis media.

Decubital abscesses do not respond to antibiotic treatment; they persist despite repeated lancing of the abscesses.

Bovine Salmonellosis

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The role of *Salmonella* in feedlot and stocker calf disease complex is probably more significant than is routinely recognized. Some of the recognition problem is that the clinical presentation in older calves is not the same as those observed in younger nursing calves which usually have an acutely fatal severe hemorrhagic diarrhea with septicemia. Additionally, some salmonella infections/isolates may in fact be secondary to a primary disease process but still play a significant role in the outcome of the primary disease. Some salmonella serotypes are of minimal pathogenicity and may have little or no clinical significance even though they are readily isolated.

Unfortunately, *Salmonella* serotyping frequently requires several weeks. Because of the many opportunities for confusion, the significance placed on a salmonella isolate can be inaccurate.

Signs of salmonella in older calves are more subtle and they often appear as poor doers or chronics. Chronic salmonella infection of the large intestine may or may not produce significant changes in the character of the stool. However, a persistent infection causing mucosal damage, with the concurrent loss of protein and the continual absorption of low levels of salmonella endotoxin, results in poor doers and chronics. Calves in this compromised state are more susceptible to many of the common viruses and bacteria present in multiple origin

cattle. *Salmonella* infected cattle appear to be unable to recover from these infections in a normal manner. Subsequently, the typical "sweat out" never seems to end and cattle continue to be pulled and repulled from salmonella infected pens.

In older calves, a concurrent BVD infection may be associated with salmonella infection making determination of the primary infection difficult.

At necropsy, the more prominent lesions are often related to other concurrent infections with pneumonia being the more prominent and readily observable necropsy lesion. If the large intestine is examined in chronically infected calves, close examination will reveal changes in the mucosa of the cecum and large intestine, ranging from slight thickening and hyperemia to extensive thickening, with focal erosions and ulcerations. A diagnosis requires culture and collection and fixation of at least three sections of the large intestine for histopathological evaluation. Culture is often negative because many of these calves are clinically ill a few days prior to death and have been treated with multiple antibiotics. In the absence of a positive salmonella culture, histological lesions of mucosal ulceration and necrosis with vascular thrombosis of the large intestine are consistent with a tentative diagnosis of salmonellosis in stocker and feeder calves.