



Treatment

Treatment of peracute colisepticaemia is usually unsuccessful because of the overwhelming number of *E. coli* bacteria that cause a fatal bacteraemia and endotoxaemia. This condition progresses so quickly that most afflicted calves are recumbent and comatose at the time of their first clinical examination. Peracute cases commonly show one or more of shock, lactic acidosis, hypoglycaemia and multiple organ failure.

If treatment is attempted it focuses on correction of endotoxic shock and the acid:base balance coupled to effective antimicrobial therapy and nutritional support. The antimicrobials used should be bactericidal and have good spectrum of activity against Gram negative bacteria – they must be administered by injection.

Specific sites of localised infection may require specific treatments. Chronic cases are usually cachectic, have polyarthritis and scour and have a very poor prognosis.

Prevention

Endemic neonatal calf losses require a thorough examination of the management of the dry and periparturient cows and newborn calves so that the following two questions can be answered. Are newborn calves being fed sufficient quantities of high quality colostrum soon enough after birth? Is the environment they are kept in likely to contain large numbers of *E. coli*? In addition, maternity pen practices that favour *E. colisepticaemia* need to be corrected. Conditions which favour faecal contamination of the coat and udder are undesirable.

Newborn calves should be removed from the calving area as soon as possible after birth and placed in individual hutches.

Key points about colostrum

- The main immunoglobulin is IgG1 but IgG2, IgM and IgA are also present.
- The best quality colostrum is obtained if there is a minimum of 40 dry days and a maximum of 90 dry days.
- Assume 'leakers' who leak from the udder before parturition have lost their best colostrum.
- Holstein calves require at least 100g of IgG1 in their first 12 hours of life.
- A colostrometer is a useful tool for assessing colostrum quality.
- Pooled colostrum from each cow's first milking may not ensure adequate immunoglobulin concentration in the entire pool.
- The colostrum from spring heifers probably has a lower spectrum of antibodies.

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