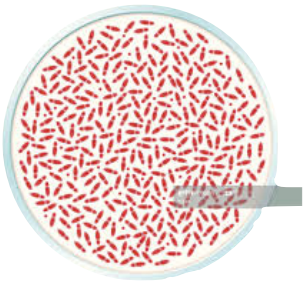
Colibacillosis

While Escherichia coli is the cause of various diseases of great economic magnitude, especially in young animals, it also



constitutes a large part of the normal commensally intestinal microflora

Etiology

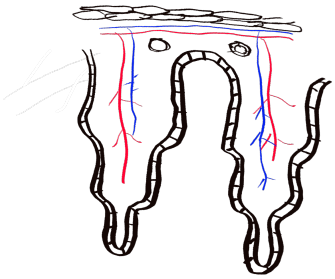
Escherichia coli is a straight Gram-negative motile rod that belongs like Salmonella to the Enterobacteriaceae family. Enteric infection caused by E. coli can be due to at least 5 different varieties of bacteria operating through different mechanisms:

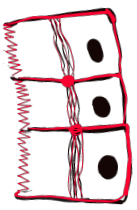
1. Enterotoxigenic E. coli (ETEC) - these strains cause the majority of neonatal colibacillosis.
2. Enteropathogenic E. coli (EPEC) d o not produce enterotoxins, but can cause diarrhoea.

3. Enteroinvasive E. coli (EIEC)invade en- - they are responsible for colisepticemia and release endotoxins.
4. Attaching and effacing E. coli (AEEC) produce verotoxins and destroy the microvilli - they produce enteric diseases.
5. Enterohemorrhagic E. coli (EHEC)cause hemorrhagic colitis and have been associated with the hemolytic-uremic syndrome in children

Epidemiology

E. coli is a natural inhabitant of some parts of the intestines of all mammals and is



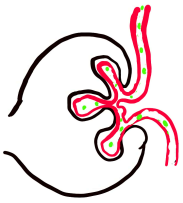


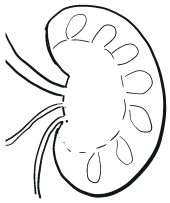
excreted in feces.A considerable economic loss to the camel industry results from colibacillosis or colisepticemia in young camelids.Without veterinary support, mortality can reach 100%. The unsanitary /unhygienic conditions in the breeding

herds along with contaminated water and inadequate feeding of colostrum cause the disease. This disease frequently associated with Salmonella, Clostridia, Pasteurella, corona- and rotaviruses as well as Cryptosporidia infections

Pathogenesis

Once these bacteria enter in the gut, these





bacteria may remain in dormant conditions / non pathogenic conditions but…in favourable condition, bacteria Bind to epithelial cells ,start colonisation & Damage
intestinal linings which cause enteritis Results yellowish/watery diarrhoea, sometimes may cause Haemorrhage enteritis clinically manifested by Bloody diarrhoea . Bacteria start Producing verotoxins which Reaches to kidney And damage endothelial cells in Glomerulus & Results in Loss of Protein, Blood Etc (Hemorrhagic Uraemic Syndrome)

Clinical signs

Clinical signs have not as yet been seen in neonates, only in animals between 2 and 4 weeks old(calves up to 6 months of age). The affected animals develop a yellowish watery diarrhoea. The hind legs and tail are covered with dried feces and the eyes are sunken deep in their orbital cavities due to the resulting dehydration.

Colibacillosis and colisepticemia in camelids produce anorexia, weakness, fever (40°C and 41°C) and yellowish diarrhoea .
Colisepticemia often develops in animal suffering from enteric colibacillosis, but may also occur without any evidence of enteric involvement. In both enteric colibacillosis and colisepticemia lesions are non-specific.

Young calf may die within 2 to 3 days

Treatment

1.Fluid therapy-Oral or parenteral electrolytes must be administered to restore fluid balance because death usually results from dehydration

2.Binding of endotoxins/pathogens and their removal from the system*Toxiclean suspension @ 0.5-1 ml / kg body wt.(min 300 ml) once in month (with lukewarm water) as prevention

3.Control of inflammatory response- Non-steroidal anti-inflammatory drugs, such as ketoprofen.

4.Broad spectrum antimicrobial-injectable antimicrobials like enrofloxacin, trimethoprim/ sulphonamide, kanamycin or colistin

It is also recommended to restrict milk intake.

Control.

1.Proper colostrum feeding

2.Maternal vaccination with herd-specific E. coli administered annually / oral vaccinations in young camel should be tried.

3.Binding of endotoxins/pathogens and their removal from the system*regularly Toxiclean suspension @ 0.5-1 ml / kg body wt. (once in month (with lukewarm water) as prevention