***Ministry of Higher Education and Scientific research***

***UNIVERSITY OF kerbala***

***College of Veterinary Medicine***

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 **nutritional diarrhea in calf**

**الإسهال الغذّائي في العجلِ**

***Supervisionاشراف***

***Assistant Professor Dr.Hayder Badri Abboud***

***الاستاذ المساعد الدكتور حيدر بدري عبود***

***By***

***Salwan Jawad Sahib***

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***Introduction***

Calf diarrhea is the single most important cause of death in

milk-fed calves. Even when calves survive, the increased

labor requirements for their caring, together with veterinary

and drug bills, make scours a costly problem for calf rearers.

Furthermore, their potential productivity is likely to be

decreased by setbacks in early life.

The causes of scours, particularly in calves under three weeks

of age, are complex. There is usually no one single cause,

with contributing factors being calf management, diet, the

environment and the presence of pathogens. Prevention and

early treatment with fluid replacement (electrolyte therapy)

can avoid unnecessary use of antibiotics ***(1)***.

 Clinical signs

1. dry muzzle, thick mucus appearing from the nostrils .

 2. very firm faeces .

 3. refusal of milk .

 4. a tendency to lie down .

 5. a high body temperature (over 39.3.C). (2)

very firm faeces .(3).  tendency to lie down .(4).



Causes

 Are best defined as flaws or gaps in management. Inadequate nutrition

, exposure to severe environment, insufficient attention to the newborn calf

, or a combination of these are often involved in scours outbreaks

The most commonly encountered noninfectious problems

include:

1. **Inadequate nutrition of the pregnant dam,** particularly

during the last third of gestation. Both the quality and

quantity of olostrums are adversely affected by not meeting

the energy and protein requirements of the pregnant dam.

Deficiencies in vitamins A and E, and trace minerals have

been associated with greater incidence of calf scours.

For more detailed information see extension publication

1. **Inadequate environment for the newborn calf.** Mud,

overcrowding, contaminated lots, calving heifers and cows

together, wintering and calving in the same area, storms,

heavy snow, cold temperatures and rainfall are all stressful

to the newborn calf and increase its exposure to infectious

agents. The wet and chilled (hypothermic) newborn calf

experiences a loss of body heat, becomes severely stressed,

and lacks the vigor to nurse aggressively and receive

adequate olostrums early in life (5).

***Prevention***

The ration of the pregnant female should be balanced in

energy, protein, minerals, and vitamins. Care should be given

to adjust the nutritional requirements during cold/inclement

weather, and to keep in mind that pregnant replacement

heifers have not reached their mature size. Particular care

must be taken to provide them with sufficient feed energy for

maintenance and growth. Failure to meet energy needs will

not only result in a weak calf at birth, but also contributes

to increased dystocia (difficult calving), delayed return to

estrus, and lowered conception rates. Best results occur when

replacement heifers are wintered and calved in advance of,

and separate from, the mature cow herd. Special attention

should be given to energy deficiencies and/or vitamin A

and E shortages ***(6)***.

***Treatment***

 *important preventive measures can be taken and therapy can be started before an etiologic diagnosis has been established. Treatment includes fluid therapy for water and electrolyte replacement and correction of acid-base disturbances, alteration of the diet* ***(7).****.*

***Reference***

*1.* **Charles L. Stoltenow**, DVM **Lani L. Vincent**, DVM, MS

Diplomate ACVPM, Extension Veterinarian Pathologist NDSU Veterinary Diagnostic Laboratory

*2.* **AS-776** (Revised) JANUARY 2003 North Dakota State University Fargo, North Dakota 58105

3.&4. Picture about nutritional diarrhea by Walter Gruenberg, DrMedVet, MS, PhD, DECAR, DECBHM

5. **Charles L. Stoltenow**, DVM **Lani L. Vincent**, DVM, MS

Diplomate ACVPM, Extension Veterinarian Pathologist NDSU Veterinary Diagnostic Laboratory

6. *Diarrhea in neonatal ruminant*  August 2014 by Walter Gruenberg, DrMedVet, MS, PhD, DECAR, DECBHM

7.Treatment of nutritional diarrhea in calf by Dr. Jon .