BOVINE MEDICINE Metabolic Diseases

Metabolic Diseases: Downer Cow Syndrome

Objectives:

 1. Define downer cow syndrome.

 2. Describe the etiology of downer cow syndrome.

 3. Comment on the management of downer cow syndrome.

 4. List methods available for lifting downer cows.

 Downer Cow Syndrome

A. Definition—cow that remains down in sterna recumbency 24 hours after first being found

B. Occurrence

 1. Depends upon several criteria

 a. Definition

 b. Incidence of milk fever

 c. Interval between onset and treatment of milk fever recumbency

 d. Body condition at time of calving

 e. Size and breed of animal involved

 2. Most commonly seen from two days before parturition until ten days after parturition

 a. 5-8 years of age

 b. High producers

 c. Larger cows

 d. History of parturient paresis

C. Etiology

 1. Sequel to parturient paresis and pressure damage

 2. Muscle damage with or without crush syndrome

 3. Nerve damage

 4. Skeletal damage

 5. Metabolic disorders

D. Clinical signs

 1. Sternal recumbency or lateral recumbency; lateral recumbency is a grave sign

 2. Bright and alert with normal temperature, respiratory and cardiovascular signs

 3. Appetite present, but often reduced

 4. Frequent attempts to rise may result in creeping or crawling

E. Clinical pathology

 1. Calcium often normal, sometimes phosphorus levels low

 2. AST and CPK levels may be high

 3. Proteinuria; myoglobinuria; ketonuria

F. Diagnosis

 1. History

 2. Clinical signs

 3. Often made by ruling out all other possibilities

 a. Maternal obstetrical paresis

 b. Systemic diseases

 1.) Coliform mastitis

 2.) Acute metritis

 3.) Acute peritonitis

 4.) Lymphosarcoma with spinal involvement

 c. Physical problems

 1.) Fractures

 2.) Dislocations

 3.) Nerve problems

 4.) Muscular problems

 5.) Spinal injuries

G. Treatment

 1. Ensure adequate treatment for metabolic disorders such as hypocalcemia, Hypokalemia, hypomagnesemia

 2. Nursing care with good footing, turning the cow frequently to avoid pressure

 3. Lifting devices

H. Prognosis

 1. May require days to weeks for recovery depending upon cause and care

 2. Clinical pathology values can be used to offer prognosis

 a. Continual rise in CPK is not good

 b. Continual rise in BUN is not good

 3. Complications that may develop may cause the prognosis to deteriorate

I. Prevention

 1. Prevention of hypocalcemia is very important in prevention of downer cow syndrome

 2. Allow for calving in a properly bedded area with frequent supervision

 3. Prompt treatment of any recumbent cow



