Benha University
Fac Vet Medicine
Animal Med Dept
Vet. Internal Medicine
Nutritional deficiency diseases
Vet. Pharmaceuticals and Biological preparation program – Summer course

Time allowed: 2hrs.
Date: 6-9-2016
Total marks: 50 marks

جامعة بنها
كلية الطب البيطرى
قسم طب الحيوان
الامراض الباطنة– امراض النقص الغذائى وسوء التغديه
برنامج الأدوية البيطرية والمستحضرات البيولوجية– الفصل الدراسى الصيفى

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Answer Model

Please answer all questions

1- Describe the clinical signs of the following:

a. Milk fever (6 marks)

Prodromal stage: short excitation

Sternal recumbency stage: head and neck are turned on shoulder with flaccid muscles

Lateral recumbency stage: with anuria constipation and loss of reflexes with semicomatosed cattle

b. Vitamin A deficiency in calves (6 marks)

(A)Night blindness:

Inability to see in dim- light.

(B) Xerophthalmia:

Thickening and clouding of cornea.

(C)Changes in skin:

1- Heavy deposits of bran-like scales on skin of cattle.

2- Dry, scally hooves with multiple, vertical cracks in horses.

(D) Body weight:

Emaciation and stunted growth occur only under experimental condition of severe vit. A deficiency but not occur under natural condition.

(E) Reproductive efficiency:

1- In male " retained libido" and degeneration of germinativeepith. Of somniferous tubules causing reduction in number of motile, normal spermatozoa.

2- In female abortion due to placental degeneration and birth of dead or weak young plus retention of placenta.

(F) Nervous sings:

3-Total blindness of both eyes due to construction of the optic nerve canal (manifested by absence of menace reflex).

4- Encephalopathy, manifested by convulsive seizures due to increased C.S.F. pressure in beef calves at: 6-8 months of age. Affected calves may collapse (syncope) and may die during episode.

2- Outline the causes and pathogenesis of the following:

a. Ketosis in cattle (6 marks)

Etiology and pathogenesis:

1- The basic biochemical findings in ketosis is hypoglycemia.

2- Hypoglycaemia may occur due to feeding of lactating cows and pregnant ewes diets of low caloric content.

3- Feeding diets of low caloric content, lead to impairment of normal carbohydrate metabolism follow:

a) Feeding diets "sufficient is carbohydrate content requirement for ruminants lead to the following biochemical pathway:

Ingestion sufficient carbohydrate

b) Feeding diets insufficient in carbohydrate content requirement for ruminants lead to the impairment in this normal for carbohydrate metabolism resulting in hypoglycemia and ketonaemia as following biochemical abnormal pathway.

b. Vitamin E/selenium deficiency in calves (6 marks)

Etiology:

Primary or secondary deficiency of vitamin E and / or selenium example :

1- Feeding diets which are deficient in vitamin E and / or selenium as feeding inferior quality hay or straw and an root crops.

2- Feeding diets which are incorporated with excessive quantities of polyunsaturated fatty acids (myopathic agent).

Pathogenesis

The role of vitam E and selenium is antioxidant- therefore, the reduction selenium increases oxidant injury of muscles. Also Se is a component of GTPxantoxoibant enzyme.

3- Plan the line of diagnosis for the following:

a. Rickets in lambs (6 marks)

History of ca, P or Vit D deficiency diet

Clinical signs: enlarged joints, rickets rosette, bowing of long bones, arching of back

X ray: reduced bone density

Lab exam: reduced level of Ca, P

b. Red urine in cattle (6 marks)

Case history: feeding barseem – late sprig season

Clinical signs: pale mucosae, rapid resp and pulse, red urine

Lab diagnosis: low P level (N= 4-6 mg%)

4-

a. Prescribe the treatment protocolforgoiter in cattle(4 marks)
   Logul's iodine drops
   Sod iodide injection

b. You are called to examine a feed lot farm with abnormal hairs of calves. Clinical Examination revealed pale MM with soiling of hind quarters. Plan your diagnosis, differential diagnosis and line of treatment?(10 marks)

The most suspected is copper def

Good Luck

Prof Dr. Mohamed M Ghanem