Benha University
Fac Vet Medicine
Animal Med Dept
Vet. Internal Medicine
General Vet Internal Medicine Exam
Food Quality and Control program

Time allowed: 3 hrs.
Date: 1-1-2017
Total marks: 50 marks

جامعة بنها
كلية الطب البيطرى
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Please answer all questions

1- Describe the clinical signs of the following:

a. Milk fever (5 marks)

3 stages of the disease are known including:

A) prodromal stage (excitative short phase)

B) Stage of sternal recumbency (semicomatosed stage). .

C) Stage of lateral recumbency (comatosed stage).

(A) Prodromal stage: (excitative short phase)

Characterized by:

1- Excitement and restlessness (vigrous-1icking of skin).

2- Hypersensitivity and fine muscle tremors.

3- Disinclination to eat or move.

(B) Stage of sternal recumbency (Semicomatused stage):

Characterized by:

1-Depression of consciousness.

2- Animal in sternal recumbency and the head turned laterally toward flank region resting on the shoulder region.

3- Dry muzzle dilated pupi1e cold extremities and loss of anal reflex, as well as, atonic digestive tract manifested by constipation.

4- Temp. normal or even subnormal.

(C) Stage of lateral recumbency (comatosed stage):

Characterized by:

1- Animal almost comatozed.

2- Animal in lateral recumbency,

3- Complete flaccidity of limbs and loss of nervous reflexes

b. Pneumonia in calves (5 marks)

1- Rapid. shallow respiration, is the cardinal sign of early pneumonia.

Dyspne occurring in the later stages when much of lung tissue is non-

functional.

2- Cough: which is:

- Dry, frequent, hacking cough in interstitial pneumonia.
- Moist., painful cough in bronchopneumia.
- Cyanosis: Not a common sign, occurs only when large areas of the lung are affected.

4- Nasal discharge: may or may not present depending upon the amount of exudate present in bronchioles and whether or not there is accompanying inflammation of the upper respiratory tract.

5- Abnormal odour of the breath:

- Decay when there is a large accumulation of inspissated pus
- Putrid when lung gangrene is present.

6- Auscultation of the lungs:

- In the early congestive stage of broncho-pneumonia and interstitial

pneumonia there is increased tronchial sound (breah sound).

-crackles (moist rales) develop in broncho-pneumonia as bronchi¬olarexudatation increases.

- Clear, harsh bronchial sounds are audible in uncomplicated inter-stitial pneumonia.
- Loud bronchial, sound when complete consolidation in either form occurs (consolidation also causes increased audibility of heart sounds).
- Pleuritic friction rub in early stages when pleurisy is also present, and muffling of bronchial Sounds in the late exudative stages.

7- In acute bacterial bronchopneumonia, there is toxemia, fever anorexia, depression and tachycardia.

2- Outline the causes and pathogenesis of the following:

a. Simple indigestion in cattle (5 marks)

Causes :

It is usually occurs in dairy cattle more than in beef cattle.

1- Dietary causes:

(a) Indigestible roughage especially with low protein in take.

(b) Mouldy, hot frozen food.

(c) Gross overfeeding especially with groins and concentrates.
(d) Sudden change to wheat or barely.
2- Limitation to available drinking water which usually occur in dry season.
3- Prolonged administration with sulfonamides and antibiotics.
Pathogenesis :
1- Primary atony is difficult to explain but the change in PH or the absorption of toxic amids or amins may be the cause.
2- Grains and fermentative reaction or carbohydrate results in increase acid production which change the optimum PH of rumen for the normal microflora (normal pH 6.8).
3- The high protein, legumes and concentrates cause increase in alkalinity.
This change in PH to either sides depress certain kinds of micoflora or micofauna. This result will cause decrease in the motility.
4- Damage food either affect the PH or produce toxic substance that cause atony of rumen.
5- Grass over feeding may cause physical interference with rumen motility.
6- The end result of the failure of the function of the forestomach is the decrease production of volatile fatty acids with consequent effect on the milk fat and quantity of milk production.
7-Anorexia is produced due to the absence of the rumen contraction which resembles hunger contraction in the monogestric species.

b. Dehydration in calves (5 marks)
Loss of body fluids or lack of water intake decreases the blood volume – hemoconcentration – decrease renal flow – oliguria
Lack of skin elasticity, decrease organ perfusions (hepatic and renal dysfunction),

3- Plan the line of diagnosis for the following:
a. Enteritis and diarrhea in calves (5 marks)

Etiological agent	**Age & class of animal affected**	**Major clinical findings**
<u>I- Bacteria</u>		
1- Enterotoxigenic *E. Coli*	- Newborn calves (3-5 d old).	- Acute profuse watery diarrhea, dehydration and acidosis.
2- *Salmonella spp.*	- All ages, outbreak occurs,	- Acute diarrhea, fever, dysentery,

3- *Clostridium perfringens* (type B and C). 4- *mycobacterium paratuberculosis* 5- *Proteus* and *pseudomonasSpp.*	stress-induced. - Young well-nourished calves. - Mature cattle, sporadic, single animal affected. - Calves treated for diarrhea with prolonged course of antibiotics	high mortality - Severe hemorrhagic enterotoxemia, rapid death. - Chronic diarrhea with loss of weight, long course, no response to therapy. - Chronic to subacute diarrhea, progressive weight loss, no response to treatment.
II- Viruses 1- Rota and corona virus. 2- Winter Dysentery (Coronavirus). 3- Bovine viral diarrhea (mucosal disease). 4- Rinderpest. 5- Bovine malignant catarrh.	 - Newborn calves, 5-21 d old, explosive outbreak. - Mature housed cows, explosive outbreak. - Young cattle (8-24 month old). Sporadic, but outbreak may occur. - Highly contagious, occur in plague form. - Usually mature cattle, sporadic but small outbreaks occur	 - Acute profuse watery diarrhea, virus can be demonstrated in feces. - Acute epizootic transient diarrhea and dysentery lasting for 24 h. - Erosive gastroenteritis and Stomatitis, usually fatal. - Erosive gastroenteritis and Stomatitis, high morbidity and mortality. -
III- Parasites OstertagiaHaemonchus, andTrichostrongylus, Oesophagostomum	- Young cattle in posture	- Acute or chronic diarrhea, dehydration, hypoproteinaemia, fecal examination.
IV- Protozoa 1- Eimeria 2- Cryptosporidium spp.	 - Calves over 3 weeks old up to 12 month of age. Outbreaks common. - calves 5-35 days of age	 - Dysentery, tenesmus, fecal examination is diagnostic. - Acute diarrhea
V- Mycotic Candida spp.	 - Young calves following prolonged use of antibacterials.	 - Chronic diarrhea, no response to treatment.

b. Toxemia in cows (5 marks)

Clinical signs

-Fever

-Anorexia

-Depression

Lab diagnosis for the MO or toxins

4-

a. Prescribe the treatmentforhypophosphatemia in cattle(5 marks)

   1- Change the diet which is rich in calcium by another diet rich in phosphorous e.g bran instead of barseem.

   2- Elevation of serurm inorganic phosphorous level by:

   a) I/V injection of 60 gram Na acid phosphate in 300 dist. water. Followed by:

   b) S/C of similar dose ; times with 12 hours intervals. Followed by;

   c) Oral similar dose till disappearance of haemoglobinurea.

   3- Bone meal 120 gram twice daily till disappear¬ance of haemoglobinurea (but expensive treat¬ment)

   4- I/V calcium hypophosphate in glucose solution (prepared by dissolving 30 gram in 10% glucose).

   5- The use of commercial useful preparation e.g:

   Tonophosphan (Hochest) 20 ml I/V or I/M till disappearance of haemoglobinurea.

   - Phospho-20 (Verbac) 15 m1 of haemoglobinurea

b. Clinical case: You are called to examinea pregnant buffalo with signs of ruminal stasis and constipation.Temp was 40 ˚C with reluctance to move. Plan your line of diagnosis, differential diagnosis and treatment? (15 marks)

   The case could be: traumatic pericarditis, TRP, Impaction, tympany,

   Most suspected is TP ot TRP