



Benha University
Faculty of Veterinary Medicine
Animal Medicine Department
Veterinary Internal Medicine
Fifth Grade Students – Small ruminant and Camel Medicine



Time allowed: 3 hours

Date of exam: 26-1-2017

Please answer all questions

I- (a) Enumerate the causes and illustrate pathogenesis of big head disease in sheep? (4 marks)

Etiology and pathogenesis:

1. Primary photosensitization: due to feeding on uncommonly plants contain photodynamic pigment as saponine or mycotoxin ...etc or some drugs as phenothiazine.
2. Secondary photosensitization (hepato-genous) due to effect of pyrrolizine, alkaloid containing plants (rare in sheep) or diseased liver.

Pathogenesis:

Normal metabolism of plant producing pigment in ruminant can be summarized as follow

1. Plant (contains chlorophyll) (in rumen by normal/ microbial action) → phylloerythrin → Absorption by portal circulation then to liver then reach the bile for excretion and consequently the peripheral blood circulation is free from phylloerythrin.
2. With liver disease → Generalized phylloerthrinemia.
3. Phylloerythrin in the skin absorb the sun light and activated (active form) in presence of protein molecules and amino acids and oxygen → it leads to the formation of toxic compounds and release of histamine → increase the permeability of capillaries to plasma proteins and consequently force the water into the affected tissue and increase the hydrostatic pressure of blood → edema and necrosis.
4. Death due to secondary bacterial invasion, liver dysfunction, inability to feed and unthriftiness (NB) - sheep that possessing haemoglobin A or AB resist to such conditions while that possessing haemoglobin B. are highly susceptible

(b) Describe the clinical features of zinc deficiency in sheep?

(4 marks)

1. Alopecia

2. Parakeratosis (Thickened and wrinkled skin).
3. Wool eating
4. Poor growth rate
5. Swollen hock
6. Excessive salivation especially during rumination.
7. Decrease in fertility and cessation of spermatogenesis.
8. Arched back and abduction of legs during standing position.
9. Anorexia.
10. Fissured hoof or sloughing of it.

Animal become highly susceptible to infection.

(c) Seasonal variations are considered as stress factors predisposing for certain internal medicine diseases in sheep. Discuss this statement and enumerate these diseases? (4 marks)

Cold seasons: pasteurellosis, pneumonia, bronchitis, urolithiasis

Rainy season: verminous pneumonia

Widy seaseins, hupomagnesemia

Summer seasons, sheep bot disease

Spring seasons: hypersensitivity diseases

II- (a) Plan your diagnosis for different types of enteritis in sheep? (4 marks)

Type	Age and predisposing factors	Symptoms
Bacterial E – Coli	in newly born lambs lack of colostrum usually in cold weather	Acute yellow diarrhoea -Toxemia and death
Clostridium Perfringens type B (lamb dysentery)	Not more than 10 days of age or up to 2 weeks	- Acute diarrhoea - Toxemia, fever and death
3. Salmonellosis	Young lambs - In adult specially in late pregnancy	- Acute diarrhoea - Septicemia and abortion
Viral 1. Rota and corona virus	Young lambs Over crowded area	- Acute diarrhoea - Fever
Metazoan 1. Oestertagia spp	Lambs 10 weeks old. Older ewes	- Diarrhoea, weight loss - inflammation of abomasum
2. Trichostronglyus	4-9 months of age	- chronic diarrhoea - anorexia dullness
3. Fascioliasis	all ages	- acute or chronic diarrhoea - icteric mucous membranes and bottle jaw

protozoa: 1. Coccidiosis	- After weaning or beginning of fattening - Bad hygiene or overcrowding	-Haemorrhagic diarrhoea. -Dysentery. -Death within 2-3 days. -Fever – anorexia.
2. Cryptosporidiosis	- 7-10 days –lack of colostrum	-

(b) Describe the treatment of different types of skin affections causing wool loss? (4 marks)

- zinc, copper: add mineral mixture, zinc sulphate 1 gm weekly

-iodine, 1-2 drop of Tr iodine to food

-mange: SC inj of ivermectin

-internal parasites: ivermectin - albendazole

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(c) Explain the following statements: (6 marks)

1- White muscle disease may cause sudden death in sheep

Due to subacute myocardial dystrophy

2-Pulmonary adenomatosis is associated with severe nasal discharge

The tumor cells have secretory granules

3-Feeding behaviour may predispose sheep and goat to certain internal diseases

Grazing on harvested fields may predispose to ingestion of foreign material and esophageal obstruction

4-Ruminal stasis may be observed in carbohydrate overfeeding in sheep

Due to lactic acidosis as low pH has direct effect on rumen motility and protozoal activity

5-Urolithiasis is mostly observed in castrated male sheep

Small diameter urethra caused by low testosterone level

6- Copper deficiency may deteriorate the immune response in sheep

1. Copper deficiency plays an important role in tissue oxidation by formation of copper containing enzymes as cytochrome oxidase, ceruloplasmin, superoxide dismutase, tyrosine oxidase and lysyl oxidase. These enzymes are essential for:

a- Controlling of the phagocytic efficiency of leukocytes.

b- Normal oxidative phosphorylation and tissue oxidation.

c- The control of over inflammatory response.

III- (a) Different types of recumbency may be observed in sheep flocks. List the causative diseases then tabulate the differential diagnosis and treatment of these diseases? (6 marks)

Digestive: impaction, tympany

Metabolic: hypocalcemia, hypomagn, and ketosis

NDD: copper, vit E and sel def

Resp: late stage of pneumonia

(b) Camel may be susceptible to different respiratory diseases. Discuss this statement pointing to diagnosis, differential diagnosis and treatment of these diseases? (6 marks)

1- pneumonia

2-bronchitis

IV- Please answer the following clinical cases:

(a) You are called to examine a sheep flock where many adult sheep were emaciated. Clinical signs included dyspnea with cyanosed mucosa. Plan your diagnosis, differential diagnosis and treatment? (6 marks)

OPP, lung carcinoma, verminous pneumonia

Most suspected: Ovine progressive pneumonia

(b) Regurgitation of food, difficult breathing with skin abnormalities were observed in feedlot lambs. History revealed addition of daily calcium supplement. Plan your diagnosis, differential diagnosis and line of treatment? (6 marks)

Goiter, pharyngeal obstruction,

Most suspected: Goiter: high calcium interfere with iodine metabolism