**Physical Examination of the Ruminants**

**(1)- Palpation:**

1-May be external palpation which may be direct by using of hand or indirect by using of probe as in case of deep wound.

2-It may be internal as in case of rectal palpation for: -Examination of the rumen. -Pregnancy diagnosis -Examination of the urinary bladder & kidneys.

 **(2) Percussion:** Percussion is of low value in large ruminant due to large thickness of the skin .

**(3) Auscultation:** may be:

1***-Vesicular*** sound as normal sound of the lungs.

***2-Lubb. Dupp***. As normal sound of the heart.

**Respiration :**

Abnormal rate may be:

***A-Hyperpnoea as in case of:***

- pain conditions.

-Pulmonary or cardiac diseases.

***B- Oligopnoea as in case of:***

-Brain diseases -Obstruction of the upper respiratory tract.

**Respiratory R hythm:**

As we know respiratory cycle consists of inspiration, expiration and pause (normally expiration is slightly longer than inspiration).

**Respiratory Depth**.

1-***Increased [labored respiration] as in case of:***

-Stenosis or obstruction of upper respiratory tract. –Fever

***2-Decreased [shallow respiration] as in case of:***

-Pain condition. - Acidosis.

**Normal Characters of The Lymph Node:**

***1-Size*** lymph nodes vary greatly in large animal but generally it’s larger in young animals than adult.

***2-Consistency*** Firm on palpation.

***3-Surface*** Lobulated in larger L.n. but generally the surface is smooth.

***4-Temperature*** Take the normal skin temperature.

***5-Pain*** Painless on palpation.

***6-Skin*** Movable freely over the surface of examined lymph node.

***7-Movement*** Mobile in relation to the neighboring tissues.

**Abnormalities of Lymph Node:**

The lymph node may be enlarged and inflamed as in case:

-Blood parasites –Actinobacillosis.



**Mucous Membranes :**

Examination of the visible mucous membranes is of great importance to know the general health condition of the anima:.

**Normal characters of mucous membrane:**

-Pale rosy in color, shining and free from any abnormal lesions or discharge.

**Abnormalities of the mucous membrane:-:**

**1-Color: *1-Pale color as in case of***: -

-Heavy infestation by parasites. -Dehydrated .

***2-Congested as in case of:***

-Conjunctivitis - Trauma -Obstruction of jugular V.

***3-Cyanosedas in case of: -***Brain disease.

-Carbon monoxide poisoning .

***4-Yellowish in case of***

-Liver diseases - Fascioliasis

***5-Peticheal hemorrhage as in case of***:- Septicemia.

**Respiratory System :**

**-Manifestations of Respiratory Diseaes:**

**1-Dyspnoea: (difficult respiration):-**

 Clinical sings -Mouth breath. -Dilated nostrils. -Pumped anus -Abnormal respiratory rhythm or type -Extension of head and neck -Cyanosis of mucous membrane

-Stenosis of upper respiratory tract, –Bronchopneumonia -Bronchitis –

 **2-Cough as in case of :**

-Bronchitis, -Parasitic pneumonia.

**3-Epistaxis (bleeding from nostrils) as in case of :-**

-Trauma -Pulmonary hemorrhage.

**4-Sneezing:**

Aspiration pneumonia -Tumor -TB.

***5-Grunting sound:-***

Grunting means that forced expiration associated with closed epiglottis and it is usually associated with painful conditions either in thoracic or in the abdominal cavity.

**5-Nasal Discharges as in case of:**

-Bacterial pneumonia, -Chronic bronchitis .

**Methods of Examination Of Respiratory System**

 **(1)-Examination Of Nasal Region & Paranasal Sinuses:**

1-Signs of health of the muzzle: -Moist muzzle.

-Free from nasal discharge. - Free from of any lesion

2- Nasal discharge. 3- Movement of nostrils. 4-Abnormal sounds are mentioned before

 **(2)-Examination of Larynx, Pharynx And Trachea (Throat)**

Examination the area of throat occurred by:

***A-Inspection***: - To determine any swelling at the area of throat which may be inflammatory or non-inflammatory.

***B-Palpation:-***To determine the nature of any swelling either:

**Inflammatory as in case of:**

-Actinobacillosis. -Inflammation of retropharyngeal LN.

**Examination of the Eyes: -**

1. Discharge:-any discharge from the eye should be noted it may be:
2. **watery in obstruction of the lacrimal duct**.
3. **Serous in the early stage and then purulent**.
4. **The discharge in unilateral or bilateral**.

2- Examination of the **conjunctiva** it is important because it is a good to indicator of the peripheral vascular system.

1. **The pallor** **in anemia.**
2. **Yellow in the jaundice may be visible.**
3. **Engorgement of the scleral vessels, petechial haemorrghes, due to acute pain or high fever**.
4. Test of the **vision** and ocular reflex such as test of the blindness
5. 



6-Abnormal shape abdomen:-

**7-Constipation :**

\*Constipation occurred when there is reduction in the movement of alimentary tract resulting in passage of small hard amount of faecal matter.

***\*Causes of constipation:-***

-Fever -Tetanus -Septicemic conditions

-Zinc poisoning -Ruminal atony -Traumatic reticulitis

-Lack of water -Indigestion -Ketosis (acetonemia) .

* abomasal impaction -Hepatitis -Abomasal displacement (right) -Ruminal impaction -Tapeworm infestation
*

 **Diarrhea or enteritis:-**

It is one of the most common problem in ruminants and there are many factors that affecting in the type of diarrhea according to age of the animal, physical conditions of the animal, feeding system, aim of breeding, infectious agents(virus, bacteria, protozoa as well as physical causes of diarrhea .

***\*Causes of diarrhea in young calf:-***

-Coccidiosis -Colibacillosis -Salmonellosis

-Sodium chloride poisoning .

**Urinary System :**

***1-Posture of urination:***

-Abnormal posture of urination may be associated with:

-Cystitis. -Urine retention. -Nephritis.

***2-Frequency of urination:***

Normal frequency up to 9 times / day.

Frequency may be increased as in case of:

-Cystitis. -Calculi (incomplete obstruction).

-Increase the fluid intake especially in winter. -Injection of diuretic.

Frequency decreased as in case of:

-Dehydration. -Urethral obstruction. -Diarrhea.

***3- Anuria & Dysuria:***

Anuria means that complete absence of urination which may be associated with painful urination (dysuria).



-Cystitis. -Urethral calculi. -Urethritis.

-Spinal cord trauma or pressure. -Hemorrhage into urinary tract.

***4- Haematouria*:** Means that, presence of blood in the urine as in case of:

\*Blood parasites. \* Hypophosphatemia. \*Pyelonephritis or cystitis

\*Trauma in the kidney or urethra. \*Urolithiasis or urethritis.

\*False use of urethral catheterization.

***5- Pyuria:*** Means that, presence of pus in the urine as in case of:

\*Inflammatory lesions in the \*Pyelonephritis.

\*Abscess in the kidney, U.B. or urethra.

**Skin :**

Skin is a stratified tissue consists of 2 major layers:-

-External epidermis.

-Internal dermis with sweat and sebaceous glands.

**Examination of the skin:**

***A-Inspection:***

1-Skin coat to detect the presence of: . -Abnormal Color

-Ectoparasites –Appearance -Lesions or pruritis or burn.

2- Skin hair to detect presence of alopecia or symptoms of nutritional deficiency as in copper deficiency.

***B-Palpation:*** to determine the skin elasticity and examine the sub-cutaneous tissue or detect the skin temperature and the nature of the presence lesions.

***C-Special methods***: Skin Scarping Test – Skin Biopsy – Ultraviolet rays examinations. 