Internal Medicine

***Causes Of The Diseases***

***A-Internal causes:-*** As hormonal diseases as dwarfism or diabetes mellitus

- hereditary diseases as hemophilia

***B-External causes:*** may be

**1-Mechanical**: as trauma, sprain or traumatic gastritis

**2-Physical;** as so cold or so hot diet or exposure to sun for long period

**3-Chemical**: as exposure to strong acid or alkaline or liking of irritant topical applications as iodine or organophosphorous poisoning

**4-Biological**: as bacterial, viral. or parasitic infestation

**5-Metabolic**: as hypocalcaemia, ketosis

**6-Nutrtional**: as vitamin A or copper deficiency

***Symptoms:-*** Symptoms means that the evidences of the diseases which my be :-

***1-Subjective symptoms*** : These are the symptoms which are confined to the animal and not available to the veterinarian as colic or pain

***2-Objective*** ; these are the symptoms which are seen by the necked eye as vomiting, or diarrhea

***3-Genral symptoms***: These are the symptoms which are detected by the veterinarian only as fever, or hypothermia

***4-Specific****:* these are the symptoms which are specific for some diseases as scooting on the ground in case of anal saculitis.

***Diagnosis:-*** Diagnosis means that the art of recognization of the disease not only that but also differentiation from other diseases

-The main step of dealing with the disease is that diagnosis because of treatment, preventive measures and control mainly depend on accurate diagnosis so, incomplete or false diagnosis leads to false treatment and bad prognosis.

***\*Types of diagnosis***:

***1-Etiological diagnosis****:* When the main cause of the disease is known as tetanus

***2-Symptomatic diagnosis****:* Depend on the symptoms that appeared on the animal and the causes are known as jaundice

***3-Therapeutic diagnosis***: Means that giving of certain drugs (depend on your geuse0 if cure is occurred so your diagnosis is right

***4-Laboratory diagnosis***: As microbiological tests, parasitological, or serological tests

***5-Specific diagnosis***: Means specific test used in certain disease as tuberculin test in diagnosis of TB. or malin test in diagnosis of Glanders

***6-Surgical diagnosi*s:-As** X-ray, laparotomy or exploratory puncture

***7-Preventive diagnosis***; this type of diagnosis can be applied in the large scale of animal group as the normal level of calcium in blood of cattle e 8-

12mg% and when this level become lower than 7mg% this indication to occurrence of hypocalcaemia, so we can avoid this condition by adding of calcium salts to the ration to keep the calcium level within normal limit

***8-Copmuter diagnosis***; the computer is supplied with data obtained from the owner and it is possible for the answer considered as diagnosis.

***Plane of Treatment:-*** -The plain of treatment depend to great extend upon the nature of the disease either infectious, nutritional or metabolic or

....etc. and on the healthy condition of the animal

-The plain of treatment including:-

**1-General care of the animal:** -The diseased animal should be placed in good ventilated area away from other healthy animal especially if infectious disease is suspected.

-Plenty water and food should be offered to the diseased animal

-The diseases animal should be placed in area where the possibility of injury is minimum.

-Correction of the bad manegmental and hygienic conditions

2-**Specific treatment;** - Means that the drug of choice of certain diseases as calcium therapy in case of hypocalcaemia

3**-Supportive treatment**: As fluid therapy to treat dehydration or multivitamins in weak animal.

4-**Treatment of complications**; As in case of dehydration which associated as a complication of sever diarrhea.

**GENERAL VATERINARY CLINICAL DIAGNOSIS**

-Clinical diagnosis means that making of complete examination of the Animal and its surrounding.

-Clinical diagnosis includes main three items which are

(I)-Taking of complete history or anamnesis.

(II)-Examination of the environment.

(III)-Examination of the animal.

***(I)-TAKING OF HISTORY .ANAMNESIS.***

-Taking of history is very important because incomplete history leads to misdiagnosis and poor prognosis

-The veterinary clinician should has an experience about the animal diseases and field expression

-Taking of history includes:-

**1-Present or immediate history : this includes**

-Animal description

-Asking about defecation, urination, gait and growth rate of the animal

-Asking about the first sign of the disease

-Asking about how long the animal has been ill?

***-Morbidity rate***: That determined by the proportion of the animals that are clinically affected compared to the total animals that exposed to the same risk

***-Mortality rate***: Determined by the proportion of the dead animals compared by the total numbers of animals that exposed to the same risk .

**2-Past history: includes**

-Asking about the previous illness and treatment

-Transportation of the animal.

-Introduction of any new animals to the herd.

-Are there any culling and the causes of culling?

-Asking about the postmortem lesion of the diseases animal

***(II)-EXAMINATION OF THE ENVIRONMENT***

- Clinical examination of the animal should be accompained by a consideration of it.s surrounding environment

-Examination of the environment includes;

1-Housing and ventilation.

2-Nature of the soil.

3-Sources of the water and food.

4-General management.

5-Disposal of the waste products.

6-Climatic and seasonal variation.

7-Stocking rate and population density.

***(III)-CLINICAL EXAMINATION OF THE ANIMAL***

(I)-Genera Inspection

(II)-Taking of -Body temperature -Pulse -Respiration

(III)-Examination of -Mucus membranes -Lymph nodes

(IV)-Physical examination by .Palpation -Percussion- Auscultation

(V)-Systemic examination of each system

-Clinical examination of the animal can be confirmed by special methods of examination of the animal as X-ray, endoscopies or microbiological tests ....etc.

**INSPECTION OF THE ANIMAL**

***Definition:*** Inspection of the animal means that observation of the animal prior to manipulation or physical examination for investigate the normal and abnormal conditions of the following points:-

1-Behaviour and general appearance of the animal

2-Physical condition

3-Posture and gait of the animal

4-Tremors and convulsion

5-Demeanour

6-Act of defecation, urination and respiration

**1-Behaviour and general appearance of the animal:-**

\*Abnormal behavior may be indicated to some diseased conditions as scooting on the ground in dog in case of anal saculitis or looking for cold place as in case of gastritis or vigorous liking of the skin as in case of mange or urticaria.

**2-Physical Condition Of The Animal:-**

- Physical condition of the animal may be

***A-Good physical condition*** which means that all bony prominent are covered with flesh, this condition is obtained in case of good management and feeding system (balanced diet quantitatively and qualitatively).

***B-Poor or emaciated or leathergy* or bad** physical condition which means that the boney prominent not coverd with flesh as in case of Dehydration . parasitism either internal or external parasites DM. TB. Persistent diarrhea

***C-Fat or obese:-*** *animal* this condition present when the obesity hinder the animal for moving due to excessive deposition of fat ,also obesity may

act as predisposing factor to many diseases as DM.

**3-Posture And Gait :-**

***-Abnormal posture and gait*** of the animal help in diagnosis of many diseases as :-

-Abnormal curvature of the long bones as in case of rickets in young animal or osteomalecia in adult one.

-Abduction of the hind leg with arched back indicated to abdominal pain.

-Praying position as in case of enteritis.

-Squatting position in male dog as in case of cystitis.

-Stumbling in gait as in case of arthritis or laminitis.

**4-Demeanour Of The Animal:-**

Demeanour means that it is the respons of the animal againest external stimuli and such respons may be normal ,decraaesed or increased as the following

**A-*Normal demeanor*** means normal response of the animal against external stimuli in the form of rising of the head moving away from the source of stimuli and looking toward the source of the stimuli

**B-*Decreased demeanor*** may be in three forms

**-Dull form**: - Delayed response against external stimuli as in case of fever or colic in pet animals

**-Dummy form**: Advanced degree of sluggish response against external stimuli but there is response against painful stimuli as in case of liver fibrosis, lead poisoning, or encephalomyelitis

**-Coma**: Similar to dummy but there is no response against painful stimuli as in case of ketoacidotic stage of DM (diabetic coma).

**C*-Increased demeanor***: - In which the response of the animal against external stimuli is more than normal degree and it may be in the following forms:

-**Mildly anxious or apprehensive**:- As in case of defect in the vision

-**Restlessness: -** There are movements of restlessness as lying down and getting up frequently, rolling or groaning as in case of gastritis or enteritis or early stage of rabies

**-Mania or frenzy**: - Which characterized by aggressive abnormal behavior as vigorous liking of the skin or uncontrolled movement as in case of rabies (late stage), or tetany or heavy infestation by external parasites.

**5-Tremors and convulsions :-**

***I-Tremors: -*** It is persisting and repetitive twitching of the skeletal muscles in strong or slight form

***Types :***

1-**Localized** means that the tremors include group of muscles only as in case of fear or overloading on group of muscle as in case of transportation.

2-**Generalized means** that the tremors include all the body as in case of fever or hypothermia.

***II- Convulsions:-*** it is forced or violent muscular contraction and such contraction may be continuous or interspersed with period of relaxation .

**Types**: 1-**Tonic or tetanic**: - In which the convulsion present in continuous manner as in case of tetanus or strychnine poisoning

**2-Clonic**: In which the convulsion present in episodes (i.e.

Interspersed with period of relaxation) as in case of hypocalcaemia.

**3-Epileptic**: In which the convulsion initially mild with tendency to increased in frequency and severity, usually in dog as in case of rabies or epilepsy.

**6-Act of defecation, urination and respiration:-**

Will be discussed latter with each system

***PHYSICLA EXAMINATION***

-Palpation - Percussion -Auscultation

***A-Palpation:-***

***Definition***:- Palpation means that manipulation or handling of different

compartments of the animal

***Methods***: - Direct method by using of the fingers of the hand or palm of

the hand

-Indirect method as using of probe as in case of examination of deep

wound

***Aims of palpation :-***

1- Detection of the body temperature.

2- Detection of the consistency of the palpated organ.

3- Detection of the size of the examined part.

4- Examination of deep sited structures.

5- Detection of the existence of pain in the examined organ.

***Types of palpation.-***

***1-Resileint palpation***:-

\*In which the palpated organ retained to its normal position or size just

after the digital pressure was ceased.

***2- Doughy palpation:***-

\*In which the palpated organ leaves a pit after pressure as in case of

edema or abscess

***3- Emphysematous palpation***:-

In which there is crepitating sound during palpation due to presence ofgases in the palpated organ as in case of palpation of s/c. emphysema

***4-Flactuating palpation***:-

In which there are waves like movement during palpation as in case of palpation of the intestine.

***5-Hard palpation***:

As in case of palpation of bone

***6-Firm palpation:-***

\*As in case of palpation of lymph nodes or liver.

**B-Percussion**

***Definition***: - Percussion means that striking on the body compartment to

detect it.s healthy condition especially deeper lying parts

***Methods***:-By using of plexmeter (plate of wood) and plexor

(hammer) -Finger-finger percussion

***Types:-***

***1- Resonant percussion***:-

It is the sound which present when percussion was done over gas

containing organ as normal percussion of the lung

***2- Dull percussion***:-

It is the sound which present when percussion was done over gas free

organ as normal percussion of the heart (area of the cardiac dullness)

***3-Tmpanic percussion***:

It is the sound which present when percussion was done over hollow

part containing gases and such gases either under pressure as in case percussion of tympany or the gases surrounded by solid structure as normal

percussion of the Para nasal sinuses (frontal or maxillary sinuses ).

***Precautions during percussion:-***

1-Plexmater or finger should be firmly pressed on the skin to avoid presence of any air spaces between the skin and plexmater

2-Plexor or hammer should be suitable with the size of the animal.

3-The strike should be originated from the wrist not from the elbow or shoulder.

4-The strike should be met with the size of the animal.

5-Plexmeter should be perpendicular with the plexor.

6-Whole the examined area should be percussed in systemic manner.

**C-Auscultation**

***Definition***:- Auscultation means that listening of certain sounds from certain organs by using of certain set ( medical stethoscope).

***Methods:***-

-Direct method by using of ears but it is not preferred in the veterinary medicine to avoid zoonotic diseases or soiling of the skin by feces or presence of external parasites.

-Indirect method by using of medical stethoscope.

**Precautions during auscultation:-**

1-The chest piece of the stethoscope should be firmly contact with the skin

2- Avoid friction of the chest piece with the skin.

3- Auscultator area should be examined in systemic manner

4-Making bilateral auscultation of the lung

5- The chest piece should be moved completely to avoid frictional sound.

**Body Temperature In Large Ruminants**

1-Taking of body temperature is one of the most important points which

should be taken during examination of diseased animal to detect:

-Normal animal (normal body temperature).

-Diseased animal (abnormal body temperature) which may be:

A-Increased more than normal (Febrile infectious disease).

B-Increased more than normal (hyperthermia non- infectious diseases)

C-Decreased than normal (hypothermia)

2-Body temperature is taken from rectum by using of blunt pull thermometer.

3-If body temperature was not be taken from the rectum, it may be taken from vagina in which the temperature is more than that of rectum by 0.5°C or from the axial in which the temperature is less than that of the rectum by 1.0°C.

4-Normal range of body temperature of the large ruminant is :

-***In adult animal*** ***37.5 . 39.2°C. -Up to one year*** ***37.8-39.6°C.***

**How to take the body temperature of animals**

1- Control the animal. 2- Move the tail to the side.

3- Put the thermometer gently into the anus, as far as possible.

4- Hold the thermometer at an angle so that it touches the wall of the rectum. Keep a firm grip on the thermometer, if the animal defecates or coughs the thermometer could come out or go into the rectum.

5- Hold the thermometer in place for half a minute. If you do not have a watch count slowly up to 30 (one, two, three,.....thirty).

6-Remove the thermometer and wipe it if necessary and read it. Do not touch the bulb as this could change the reading.

**Clinical Significance Of Body Temperature:**

**(I)-Hyperthermia:** \*Which means that elevation of body temperature than normal due to physical agent.

***Examples:*** 1) Heat stasis 2) Sun stroke

**(II)-Hypothermia:** \*Which means that lowering of body temperature than normal level. ***Examples:***

***-*** Hemorrhage, dehydration and anemia. -Diseases of the brain.

-Prior to death except in case of tetanus & hypomagnesaemia.

Exposure to cold weather for long period especially in newly born animals.

-Impaction, tempany and parturient paresis due to circulatory collapse.

**(III)-Fever:**

\*Fever means that elevation of body temperature than normal level due to infectious, surgical or chemical causes.

**Taking Of Pulse In large Ruminants**

\*Taking of pulse is very important in examination of animal because it gives good view about hart or circulatory system in general. There are considerable points which should be taken during taking of pulse:

**(1) Site of Taking Of Pulse:**

1-Pulse as we know should be taken from an artery and this artery should be: Superficial and medium sized artery .and Pass in adherent to solid structure as bone or tendon to be easily to be palpated.

2-Pulse taking in large ruminants from:

-Middle coccygeal artery. -Facial artery -Median artery.

**N.B.:** \*Taking the pulse from middle coccygeal artery is preferable because we can take the pulse and respiratory rate at the same time but it.s not preferable due to it.s small pulse due to it.s small artery and presence of fecal contamination at these area.

\*If the pulse wave can not be detected because of restlessness of the animal, generalized muscle tremors or obesity ...etc. the heart rate (beat) are counted with the aid of stethoscope if necessary.

**(II)-Pulse Rate :**

1-Pulse rate means that the numbers of pulse wave per minutes.

2-Normal pulse rate in the:

***Cattle*** ***55-80 p.w./min. Calves*** ***100-120 p.w./min.***

3-***Tachycardia as in case of:***

-Toxemia, septicemia . Hypomagneseima.

-Hyperthermia, febrile conditions.

-Fear and excitement and pain conditions.

***4-Bradycardia as in case of:***

-Hypothermia and prior to death. -Traumatic reticulitis.

-Brain diseases. -Weakness . Prior to death.

**Respiration In Large Ruminant**

**(1) Type:** 1-Respiration in large ruminants is abdominal respiration.

2-Abnormal type may be:

-***Wholly thoracic as in case of :***

-Peritonitis -Reticuloperitonitis. -Impaction or tempany.

***-Wholly abdominal***:

-Traumatic pericarditis. -Sever pneumonia or pleurisy. -Fractured rib.

**(II)-Rate:**

***1-In adult:- 10-30 Resp. cycle / min. In calves: 15-40 Resp. cycle / min.***

2-Respiratory rate can be detected clinically by:

-Observing the movement of the flank region.

-By using of stethoscope. -Placing hand in front of the nostrils.

3-Abnormal rate may be:

***A-Hyperpnoea or polypnoea (******in rate) as in case of:***

-Fear and excitation or pain conditions.

-Febrile diseases or hyperthermia.

-Pulmonary or cardiac diseases.

-Anemia as compensatory to anemic hypoxia.

***B- Oligopnoea (******in rate) as in case of:***

-Brain diseases . Uremia. -Obstruction of the upper respiratory tract.

**Superficial Lymph Nodes In Large Ruminants**

***1-Prescapular or superficial cervical lymph node***: in the anterior aspect of the scapula slightly dorsal to shoulder J.

***2-Prefemoral or precrural lymph node***: in the anterior aspect of the femur slightly dorsal to stifle joint.

***3-Sub-maxillary lymph nodes***: they lie behind the intermaxillary space near to the angle of the jaws.

***4-Supramammary lymph node:*** they are situated in the premium at the base of the udder and can be palpated by both hand from the upper 1/3 of the udder and directed toward the perineum.

*5-Superficial inguinal lymph nodes*: situated at the base of the scrotum.

***6-Pharyngeal lymph nodes***: A-Retropharyngeal L.n. Posterior to the pharynx. B-Sub-parotid or Parapharyngeal L.n.under the parotid salivary gland .

**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:**

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

-Blood parasites .Actinobacillosis. -3 days fever [ephemeral fever].

-Caseous lymphadenitis (corynebacterium) or edematous skin disease.

-Inflammatory reaction to wound. -Lymphosarcoma. -Mastitis

**Mucous Membranes In Large Ruminants**

1-Examination of the visible mucous membranes is of great importance to know the general health condition of the animal.

2-Examination of mucous membrane is preferred than examination of the skin because of:

-Thinner epithelium -Lack of hair. -Clear color.

3-Points of examination of the mucous membrane:

A-Color. B-Foreign body or abnormal structure. C-Discharge or swelling.

**Types of visible mucous membranes:**

-Conjuncitival mucous membrane -Oral mucous membrane

-Nasal mucous membrane -Vaginal or scrotal membrane

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

**A-Color: *1-Pale color as in case of***: -Anemia except hemolytic one.

-Heavy infestation by parasites. -Dehydrated or debilitated animal.

***2-Congested as in case of :*** Febrile disease. - Hyperthermia

-Conjunctivitis - Trauma -Obstruction of jugular V.

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

-Carbon monoxide poisoning -Cardiovascular or respiratory diseases.

***4-Yellowish or Icteric as in case of:*** -Jaundice. - Leptospirosis

-Liver diseases - Fascioliasis -Hemolytic anemia

-Hypophosphatemia.

***5-Peticheal hemorrhage as in case of***:- Septicemia . Phosphorus poisoning or sever constipation or laminitis

**Respiratory System In Large Ruminants**

**(II)-Manifestations Of Respiratory Diseases In large Ruminants:**

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

***dyspnoea:***

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

***\*Diseases associated with dyspnoea:-***

-Stenosis of upper respiratory tract. -Bronchopneumonia

-Bronchitis –Impaction -Pulmonary odema and congestion -Anemia

-Traumatic pericarditis -Brain diseases.

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

Bronchitis -Parasitic pneumonia

-Interstitial pneumonia (viral pneumonia) -Pericarditis.

-Pneumonia (bacterial pneumonia) -Pleurisy

-Catarrhal laryngitis or pharyngitis

\*Inducing of cough by closure of nostrils or pressure on larynx or tracheal rings.

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

-Trauma -Pulmonary hemorrhage

-Rhinitis -Anthrax -High blood pressure.

-Malignant catarrhal fever

**4-Sneezing:**

-Rhinitis -Aspiration pneumonia

-Inhalation of irritant smoke.

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

Bacterial pneumonia -Chronic bronchitis

-Pulmonary edema -Malignant catarrhal fever

-IBR(Infectious Bovine Rhinotracheatitis)

-Gangrenous pneumonia. -Rhinitis

-Pyogenic infection of Paranasal sinuses.

***Nasal discharge may be:***

-Serous (in early stage of diseases or mucoid in late stage or after secondary bacterial infection).

-Contain gas bubbles.

-Copious (acute diseases or scanty in chronic form of disease).

-Unilateral (in unilateral affection of upper respiratory tract) or bilateral in affection of lower respiratory tract.

-Tinged with blood -With bad odor as in case of neglected case of infection or in gangrenous pneumonia.

**6-Abnormal Respiratory Sound (stridores) as in case of:**

-Choke. -Laryngeal paralysis (roaring sound with inspiration)

-Soft palate paralysis (roaring sound with expiration)

-Fractured nasal bone (roaring sound with both expiration & inspiration)

**7-Involuntary Movement Of Nostrils as in case of :**

-Laryngeal edema. .Dyspnoea –Hydrothorax.

**Methods Of Examination Of Respiratory System**

(I)-Examination of the nasal region & paranasal sinuses.

(II)-Examination of the larynx, pharynx and trachea (area of throat).

(III)-Examination of the lungs and pleura (chest).

(IV)-Special methods of examination.

***Paranasal sinuses (maxillary and frontal sinuses).***

\*Can be examined by:

***A-Inspection: -*** To determine any abnormalities at the area of sinuses.

***B- Palpation***:-To determine temperature, pain, swelling or fracture.

***C-Percussion***: Normal sound is tympanic

-Abnormal sound is dull as in case of in paranasal sinusitis or empayemia.

**Examination Of The Lungs & Pleura (Chest)**

1-Inspection to determine any abnormal respiratory types rate.. . etc.

2-Palpation: to determine the existence of pain as in case of fractured ribs or pleurisy.

3-Percussion: is of low value in large ruminant because of thick skin.

4-Auscultation: area of percussion and auscultation.

\*Normal auscultation of the lung: is vesicular sound which resembling to ***.V***. sounds with inspiration and ***.F.*** sound with expiration.

**Digestive System In Large Ruminants**

**A-Manifestations Of Alimentary Tract Disorders:-**

**(I).Abnormal prehension:-**

\*Prehension in cattle by using of the tongue and then nipped off the food between the front teeth and dental pad.

**(II)-Abnormal mastication:-**

\*Problems in mastication in large ruminants are rare but some animal may drop the food from the mouth and other may retain the food in the mouth when there is problem in mastication.

**(III)-Excessive salivation (sialosis):-**

\*Sialosis or excessive salivation resulted either from excessive production of saliva or as a response of painful condition in the oral cavity.

**(IV)-Regurgitation of food:-**

\*Uncommon in large ruminants as the regurgitation is considered as a normal step of rumination, but when it occurred outside the mouth or involuntary it considered as abnormal.

**(V)-Dysphagia:-**

\*Swallowing or deglutition means that transportation of masticated food from the oral cavity to the stomach through the pharynx and esophagus and any abnormalities in the swallowing process reflected on the animal in the form of dysphagia (painful and/or difficult swallowing).

**VI)-Abnormal shaped abdomen:-**

\*Abnormal shaped abdomen in large ruminants may be either by increased sized (distended) or reduction in the size of the abdomen.

***\*Causes of distended or increased sized abdomen:-***

-Abomasal displacement -Tempany -Ascitis or liver diseases. Impaction

**VII)-Constipation and tensmus:-**

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

\*Constipation may be associated with tensmus or straining or signs of pain specially when there are problems in the pelvic cavity, alimentary tracts organs or urogenital organs.

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

-Fever - Septicemic conditions

-Ruminal atony -Lack of water -Indigestion –Ketosis

**VIII)-Colic:-**

\*Signs of colic in large ruminants in the form of restlessness, kicking of the abdomen, or rising and laying down frequently are similar to that of horses but in horse are clearer than that in large ruminants.

***\*Causes of colic:-***

-Peritonitis -Traumatic reticulitis

-Abomasitis -Omasal or abomasal impaction

-Ruminal tempany - Abomasal displacement

-Impaction (lactic acidosis) -Hepatitis .Cystitis

**(IX)-Diarrhea or enteritis:-**

\*It is one of the most common problem in large 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......etc.) as well as physical causes of diarrhea .

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

-Coccidiosis -Colibacillosis -Salmonellosis

**\*Physical Examination Of The Stomach:-**

**(I)-Rumen:**

1-It.s the first and the largest part of the stomach represente about 80% of the total area of the stomach and it is presented on the left side of abdomen and it can be examined (inspection,palpation ,percussion or auscultation) at the left sublumber fossa.

*-* ***Palpation of the rumen:*** \*Normally .***Resilent.*** palpation.and abnormally as in case of :-

***\*Doughy*** palpation as in case of Impaction.

***\*Emphysematous*** palpation as in case of Tempany.

***-Auscultation of the rumen*:** Normally .***Gurgling or Booming.*** sound in the normal rate of 2-5 / 2minutes, the sound occurred due to the movement of the fluid and food particles in the rumen which imposed by gase bubles.

***-Percussion of the rumen*** Normal percussion resembling to **.Resonant**

**sound.** while abnormal percussion may be :

***\*Dull*** percussion as in case of Impaction.

***II)-Reticulum:***

1-It follows the rumen and it is the smallest part of the stomach, represent about 5% of the total size of the stomach, it is the most cranially situated comportment of the stomach apposite to 6-8th intercostalspaces on the left side of the abdomen.

**2-**Normal auscultation of the reticulum is **.Swiching sound.**

***(III)-Omasum:***

1-It follows the reticulum and represents 8% of the total size of the stomach, lies on the right side of the medium plain of the body and rest on the abomasum.

2-It cannot be examined clinically because it.s rested on the abomasums.

***(IV)-Abomasum:*** .True stomach. or .glandular stomach .

1-It.s ressembling the monogestric stomach in mono-gastric animal. compressing about 7% of the total size of the stomach.and it.s ***.U.*** shaped structure laying on the abdominal floor on the right side opposite to 7-9th ribs or intercostal spaces.

2-The sound called .***tinkling or high pitched metalic sound.***once per 15

minutes

3-Absence of the abomasal movement as in case of:-

-Abomasal displacement (right or left) -Impaction- -Abomasal ulcers.

**Cardiovascular System In Large Ruminants**

**Physical Examination Of The Heart**

A-Inspection B- Palpation C- Percussion D- Auscultation

**(A) Inspection: is of low value in large ruminants**

1-Inspection occurred by observation of the so called .***Apex beat***.

**B) Palpation:**

1-Palpation of cardiac area gives the chance to detect the strength and

Extent of the cardiac impulse (Apex beat) and it.s occurred by placing the palm of the hand over the cardiac area and slight pressure is applied to compress the chest wall.

**(C) Percussion: .At 4th-6th intercostals space.**

1-Percussion of the cardiac area provide .Dull sound. because it.s gas free organ

**D) Auscultation:**

1-Careful auscultation will give more valuable information concerning the heart status

2-It.s carried out in the same manner as for the lung by the direct or indirect method with the aid of stethoscope and the chest piece of the stethoscope should pressed firmly against the chest wake on the left side in the 3-6th intercostals space beneath and above the point of elbow joint.

**(I) Normal Heart Sounds:-**

\*Normal heart sound by auscultation in large ruminants is lupp dupp sound

**Abnormal Heart Sounds By Auscultation**

**.Murmurs:**

It.s arises within the heart usually as a result of valvular insufficiency or stenosis it has two types:

1. Diastolic murmurs
2. Systolic murmurs.