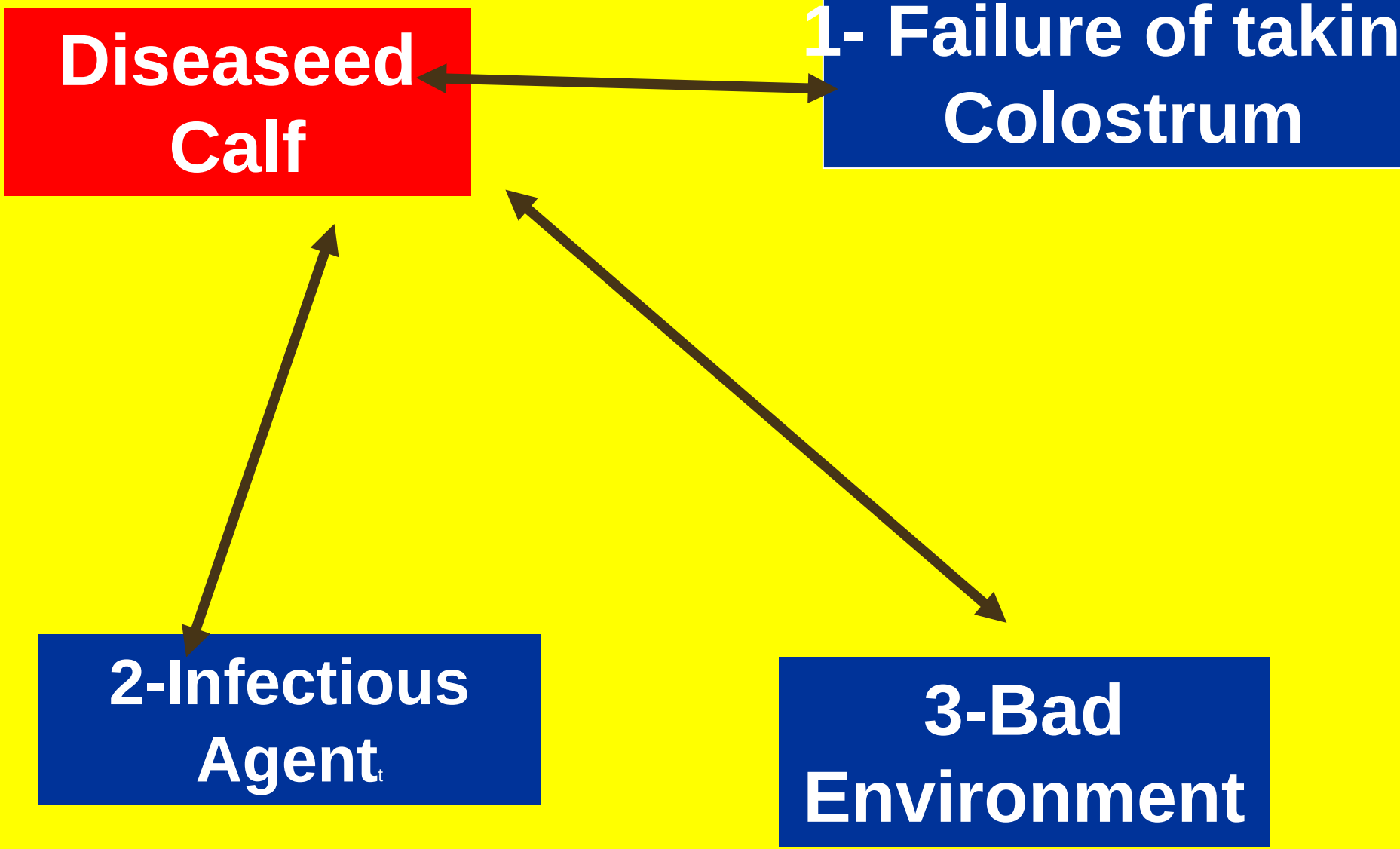
New born calf diseases



Prof .Dr Hamed Attia
Faculty of Veterinary Medicine
Zagazig university

Main Factors causing diseases in calves



Main causes of Diseases

- **1-Prenatal disease :**
- 1) **Fetal diseases:**
- e.g. prolonged gestation, congenital defects, abortion, fetal deaths with resorption or mummification.
- 2) **Parturient diseases:**
- diseases associated with dystokia causing cerebral anoxia, injuries of skeleton and soft tissues

3) Postnatal diseases:

- **(A) Early postnatal diseases:**
- within 48 hours e.g. malnutrition due to poor nutrition, hypothermia due to exposure to cold or special disease (Navil ill and Collibacillosis).
- **(B) delayed postnatal diseases:**
- within 2 -7 days after parturition ,increased susceptibility to infection due to colibacillosis .
- **(C) late postnatal disease:**
- within 1 - 4 week of life e.g. white muscle disease, enetrotoxemia.

4) Congenital defects

- **1- Period of the ovum:**
- causes deaths of the ovum and resorption e.g. vibriosis.
- **2- Period of the embryo :**
- - Structural abnormality caused by vitamin A deficiency, toxic agent, infection.
- - Death of the embryo and resorption or abortion (vibriosis).
- **3- Period of the fetus and fetal growth:**
- Abortion Brucella abortus, IBR .
- Stillbirth Dystokia, hypoxia.

1-Colostrums' feeding

give

(passive immunity)
Protect calves for the first month after birth.

Good Colostrum

- Thick and creamy
- High in antibodies.
- High in solids, protein, fat.



Good colostrums

- **Soon enough :**

  Within 2 hrs. of birth

- **Volume enough** → **(5-10 %B W)**
- **Concentration enough :**

  Select first feeding colostrums from those cows producing less than 10 kg.

Absorption of Antibodies during the first 24 hours



Source: *Journal of Dairy Science (1979) 62:1766-1773.*

2-Infectious agent

1. Viral infections
2. Bacterial
3. Parasitic
4. Mycplasma infection

3-Environment Stress

- Weaning, transport,, dehorning.
- Dampness & overcrowding.
- Fatigue due transportation.
- Depletion due nutritional def.

Important Notes

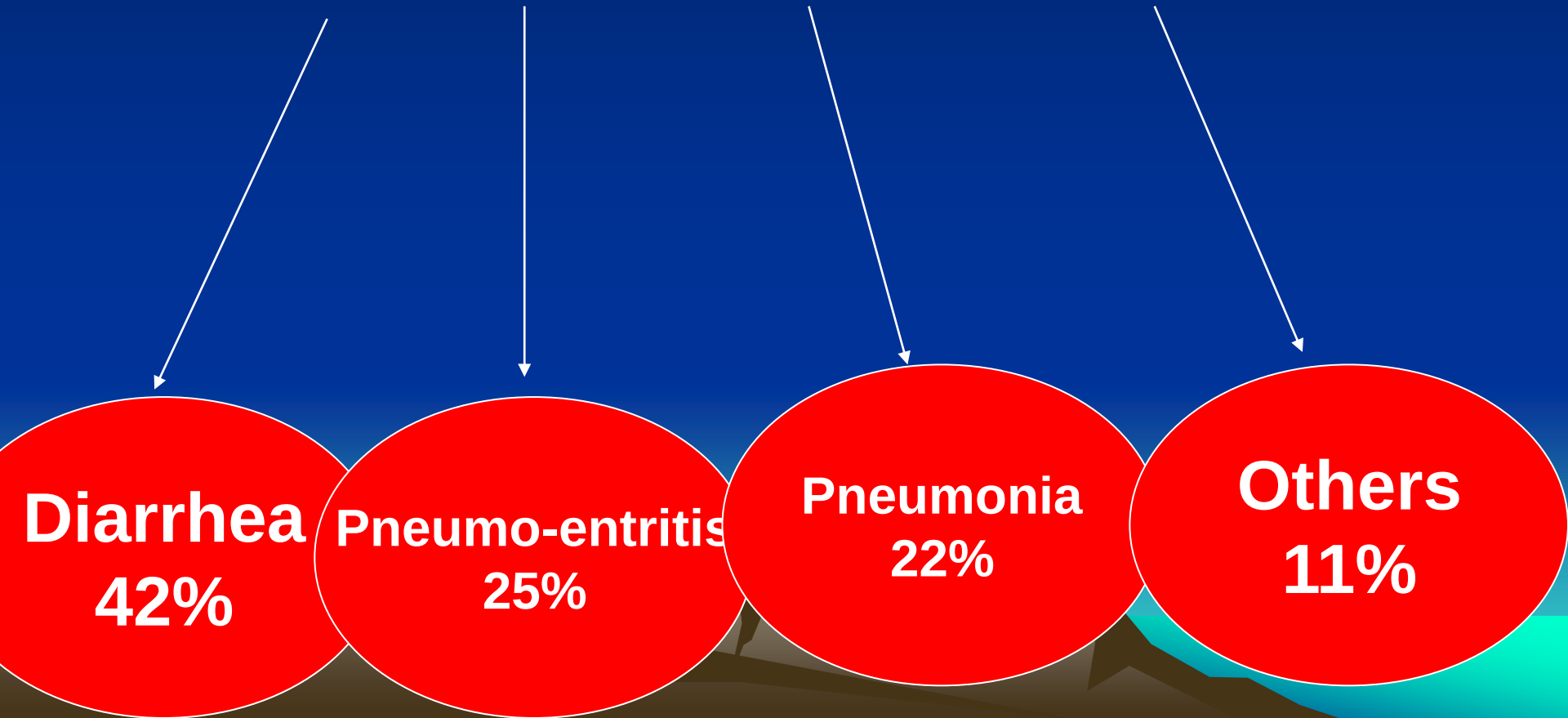
Protection of calf for one day	Give you	Protection for one month
Protection of calf for one month	Give you	Protection of calf for one Year

Deaths in calves

Up to one Month
75%

One M to One Year
25%

Major Causes of Calf Problems



Main factors

- Diagnosis
- Drug used
- Dose of the drug
- Duration of treatment

1-Infectious calf diarrhea

I-Infectious diarrhea **Calf Ages**

A-**Bacterial Causes:**

E. coli → <5 da

C. perfringens B, C → 5-30 da

Salmonella → >15 da

2-Viral Causes:

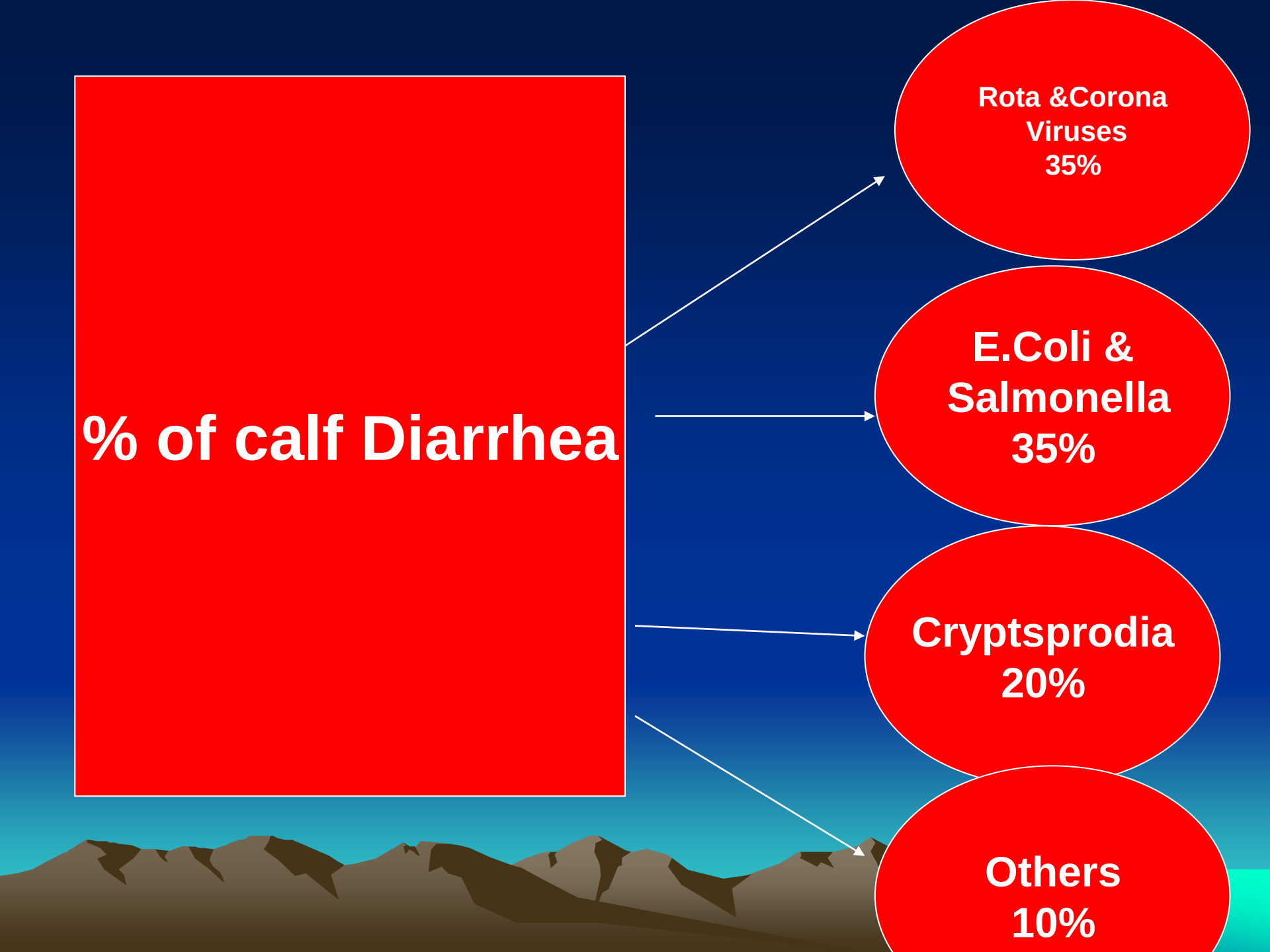
Rotavirus& Corona Virus → 5-15 days

BVD → >30 days

3-Protozoal Causes:

Cryptosporidia → 5-30 da

Coccidia → >15 da


% of calf Diarrhea
Rota &Corona Viruses 35%
E.Coli & Salmonella 35%
Cryptsprodia 20%
Others 10%

II- Dietetic diarrhea

- (1) Drinking excessive amount of milk at too long intervals.
- (2) Overeating
- (3) Sudden change from whole milk to milk replaces.
- (4) Poor quality colostrum.
- (5) Plant or fungal toxins.

Important Notes

In Calf Scour
Look on the animal
not on the feces

1-
Appetite

2-
Temperature

3-
General condition
- **Standing position**
- **Recumbent**

4-
Dehydration

Metabolic effects of calf scour

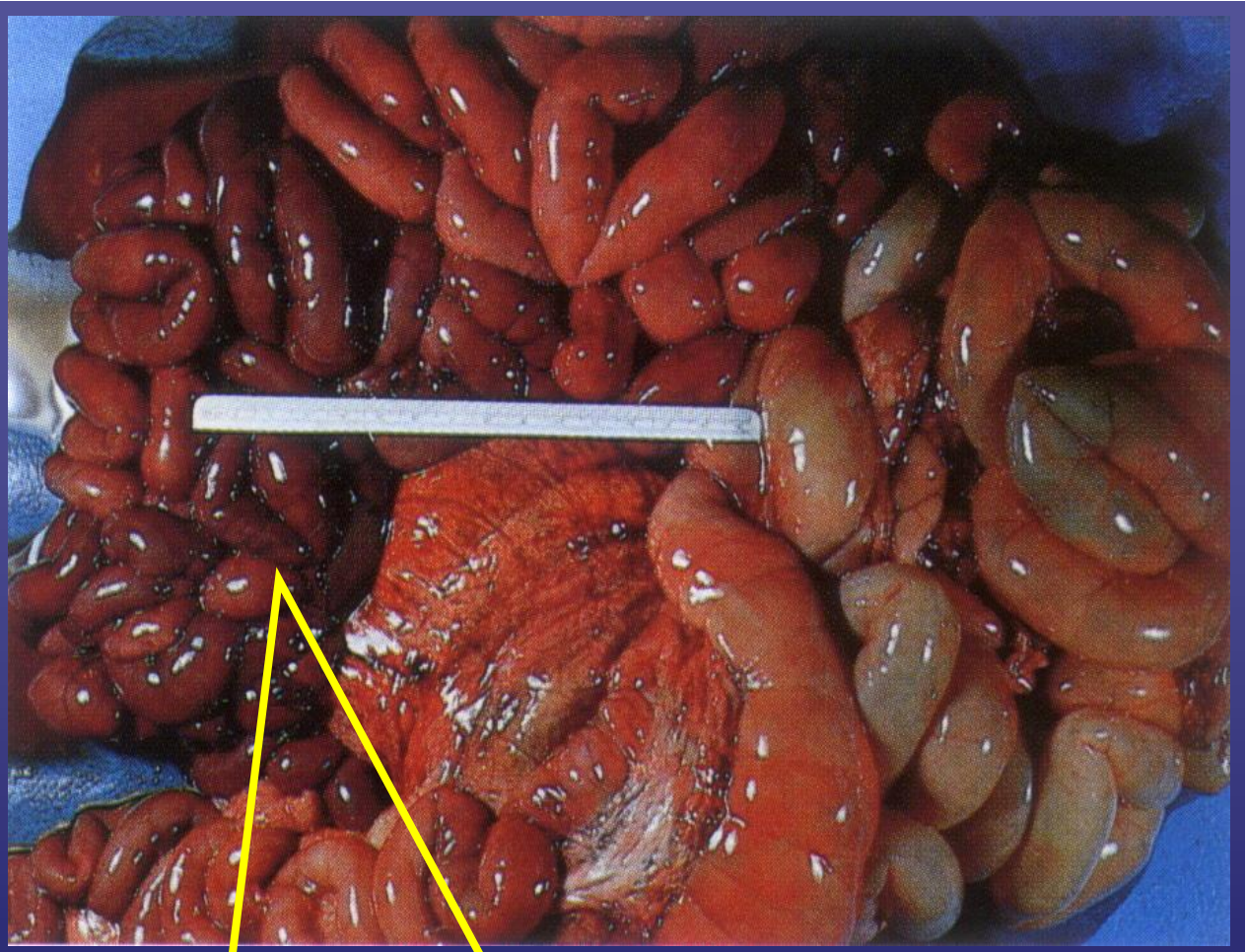
- Dehydration
- Acidosis
- Electrolyte imbalance

Colure of feces

- 1-Profuse liquid diarrhea → **E Coli**
- 2-Scant feces with mucus → **Corona Virus**
- 3-Presence of frank blood indicate hemorrhage of the colon or rectum.
- 4-Dark red blood indicate lesion in small intestine.
- 5-Balck tarry feces indicate hemorrhage in abomasum or duodenum.

.

5- P.M. findings.



EX:

CL.perfringes:

small intestine

dark red
ischaemic necrosis
some parts are gas filled.

Line of treatment of enteritis

1-Anti-acid (systemic).

2-Fluid therapy.

3-Anti-inflammatory

4-Antibiotic

5-Antiparastic drugs

6-Intestinal astringent and coating

1- Anti-acid (systemic).

- R/Na bicarbonate 1.3% 0.5-1 L I/V

according to the degree of acedemia

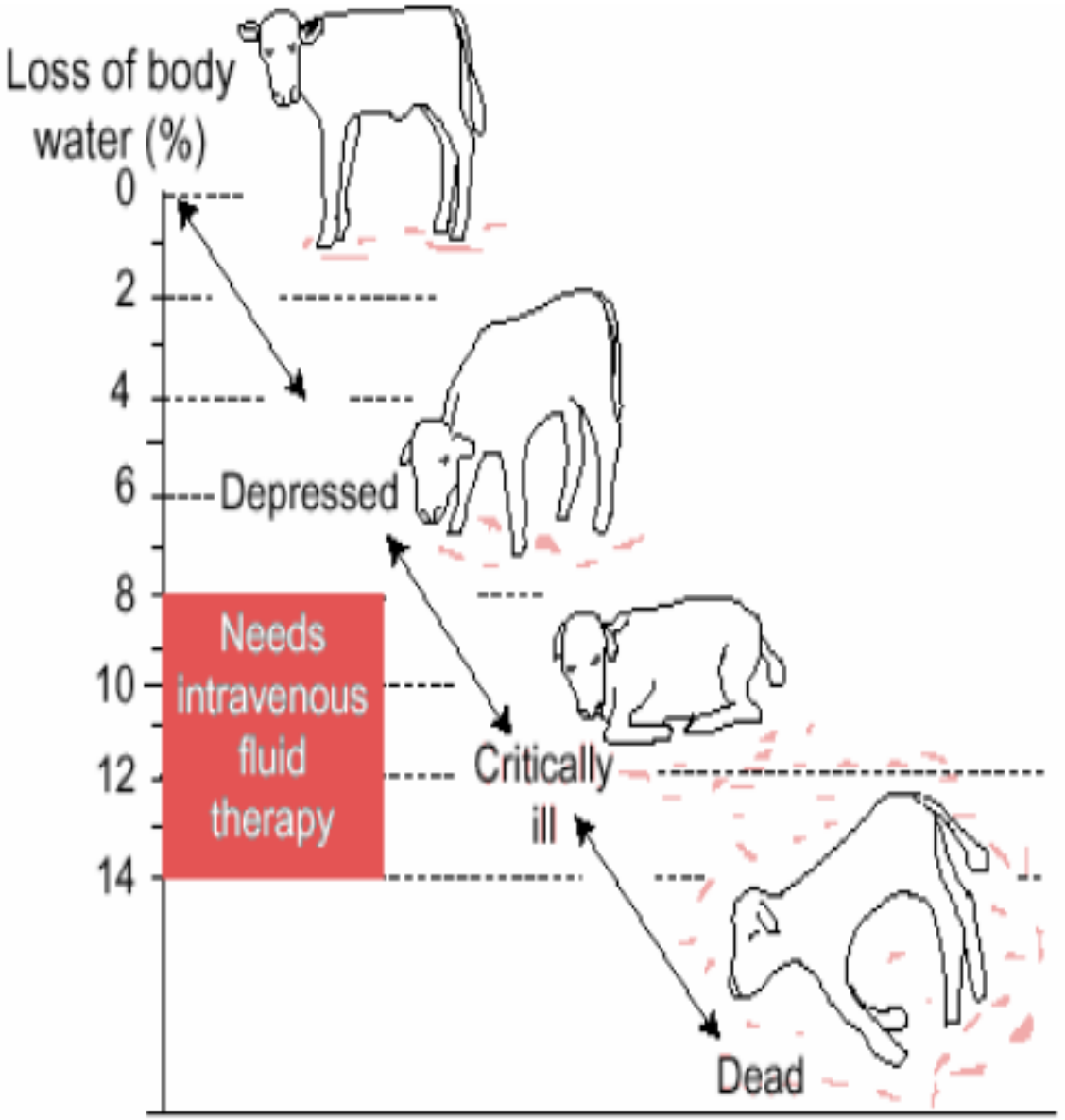
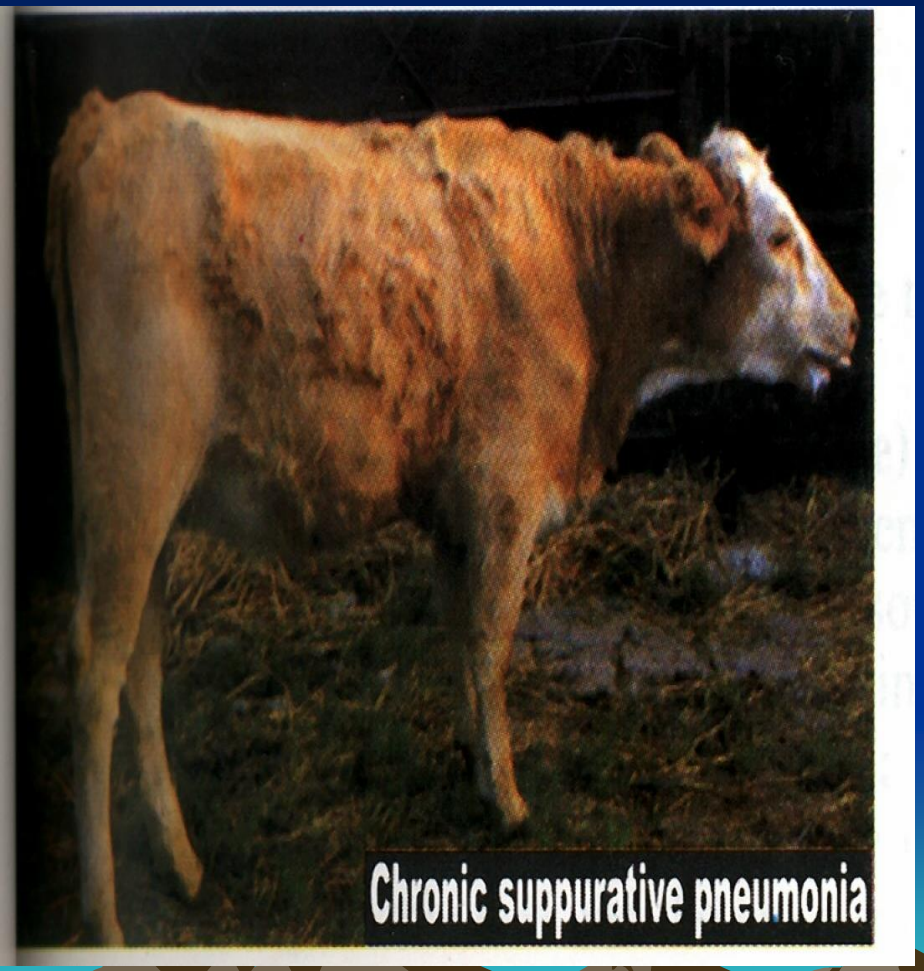


Figure 1. Visual representation of percent dehydration as related to clinical symptoms and health of calves. Adapted from M. A. Wattiaux (2005).

2-Fluid Therapy



A- <u>Standing position</u> (5%):

- Oral hydration is enough to replace fluid loss
- Ex:

R/ Rehydrane sachet

R/Sacrolyte

Fluid Therapy for Calves

- **objectives:**
  - **correct dehydration**
  - **correct acid/base abnormalities**
  - **correct electrolyte abnormalities**
  - **provide energy**

I /V Fluid therapy

- 2 Liters Na Bicarbonate 1.3%
- 1 Liter 0.9% Na Cl
- 1 Liter Glucose 5%
- 1 Liter Ringer lacte or acetate

Rate of administration

- 2 Liter per hour for the first hours
- 1 liter per hour until dehydration is corrected

B-Sternal recumbancy

2-Sternal recumbancy

(10%) of body weight:

Body weight = L/24h

10

+

Maintaining Dose= 50 Ml /Kg BW

Sternal recumbancy



B-Sternal recumpancy

Ex: If a 40 Kg calf is 10 % dehydrated, it will have lost:

40 x0.1= 4 Liter

+

Maintaining Dose= 50 x 40 = 2 Liter

Total Dose **in** 24 Hours = 6 Liters

Sternal recumpancy

40 Kg BW



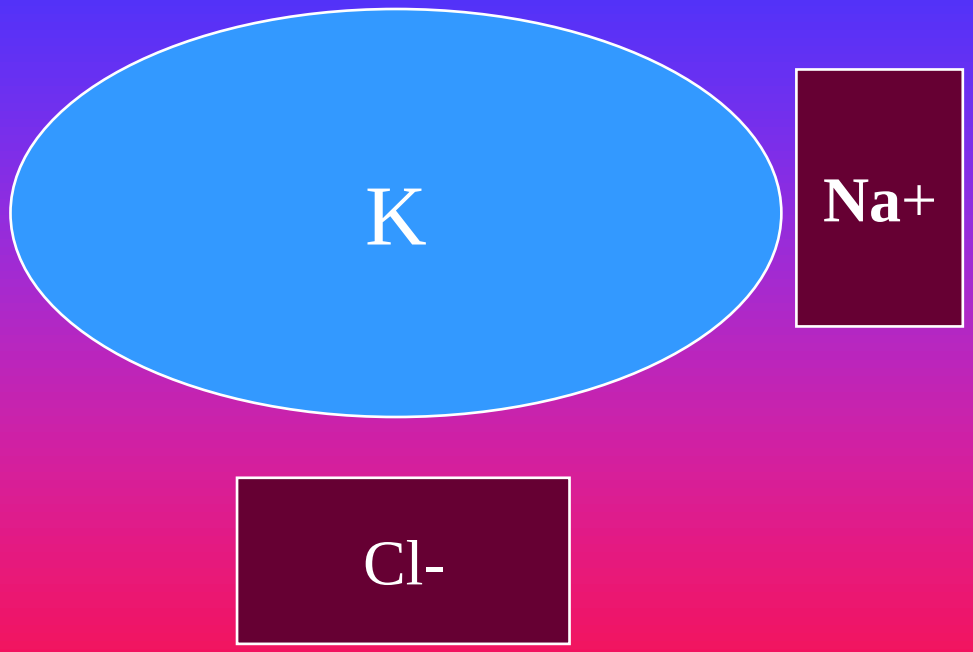
لا تعطى المحاليل على دفعة واحدة ولكن كل ٦-٤ ساعات

C Lateral recumpancy (12%):

- **Lateral recumbancy + Hypothermia**
- **bad prognosis**



Distribution of electrolytes



Types of fluid therapy

- 1-Saline (Na Cl 0.9%).
- 2-Ringer solution (Na Cl 0.9% + K Cl).
- 3-Lactate ringer (Na Cl 0.9% + K Cl + Na Lactate).
- 4-Isotonic Na bicarbonate (1.5%, 2.5%).
- 5- glucose saline

3-Non steriodal anti-inflammatory

- R/Flunixine meglumine
- Tolfenic acid
- Ketobrofen
- Melgxocam
- Declophenac Na

Advantages

- Anti-inflammatory
- Strong analgesic
- Atipyretic
- Anti-endotoxic

N B:
Non Steroidal anti-inflammatory should be given after hydration of the calf

4-Broad spectrum antibiotic

- **Systemic Antibiotic:**
- **Examples:**
- **Folorfenichol**
- **Marbofloxacine**
- **Cephalosporion**

In Dietetic diarrhea

- **Oral Antibiotics therapy.**

Ex:-(Oxytetracycline hcl)

- **Sulfa & Trimethoprime drugs.**

6-Antiparasitic agents ...

- ***R/ Ivermectine 1cc /50 Kg. B.w. S/C***

Prescription in dietetic diarrhea

- R/Pectin & qualine mixture 40 ml
- R/S Guandine 10 g
- R/Tannic acide 10 g
- R/Cloramphenicol 3 g
- R/Starch 50 g

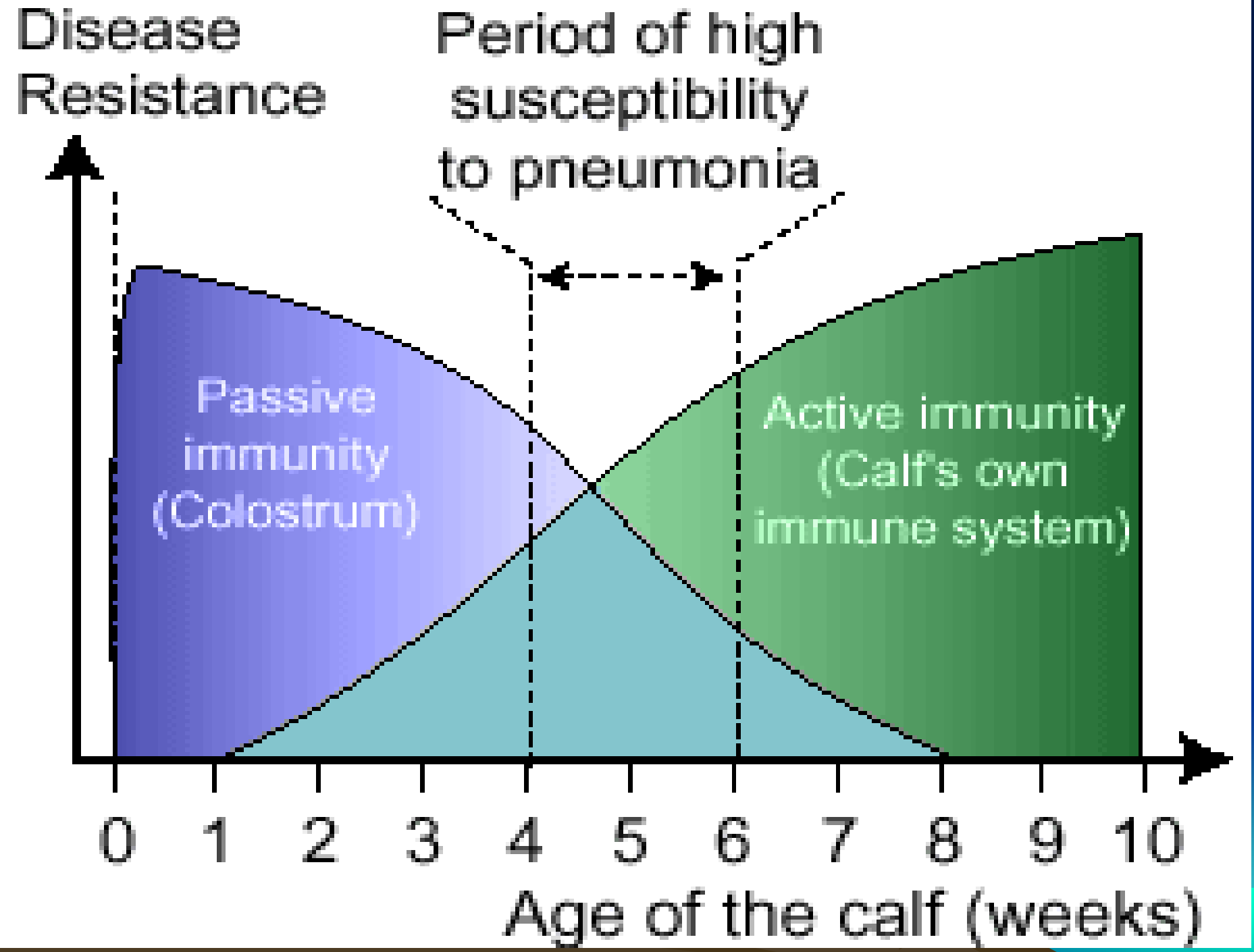
NB:
In Large animals multiply in 10
+Zanil 100 Ml for paramphistomum



2-

Pneumonia in calves




Disease Resistance
Period of high susceptibility to pneumonia
Passive immunity (Colostrum)
Active immunity (Calf's own immune system)
0 1 2 3 4 5 6 7 8 9 10
Age of the calf (weeks)

Causes of respiratory diseases in calves

- Viral
- Bacterial
- Parasitic
- Mycoplasma

Postmortem findings

- lung edema .
  - interstitial pneumonia
  - Lung fail to collapse
  - Sub-pleural emphysema
  - Enlarged Bronchial and mediastinal L.N .





II-Bacterial Diseases

Clinical Signs

- **5) By auscultation of the anterior ventral lung**



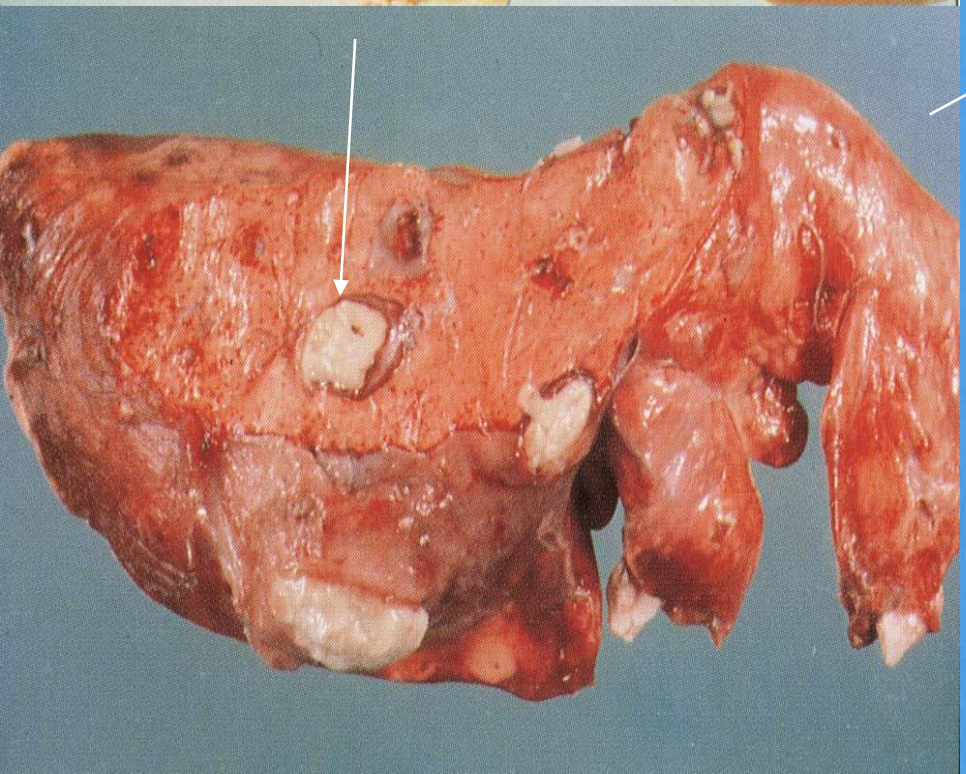
- **crackles and wheezes and an increase in bronchial sounds especially on inspiration.**

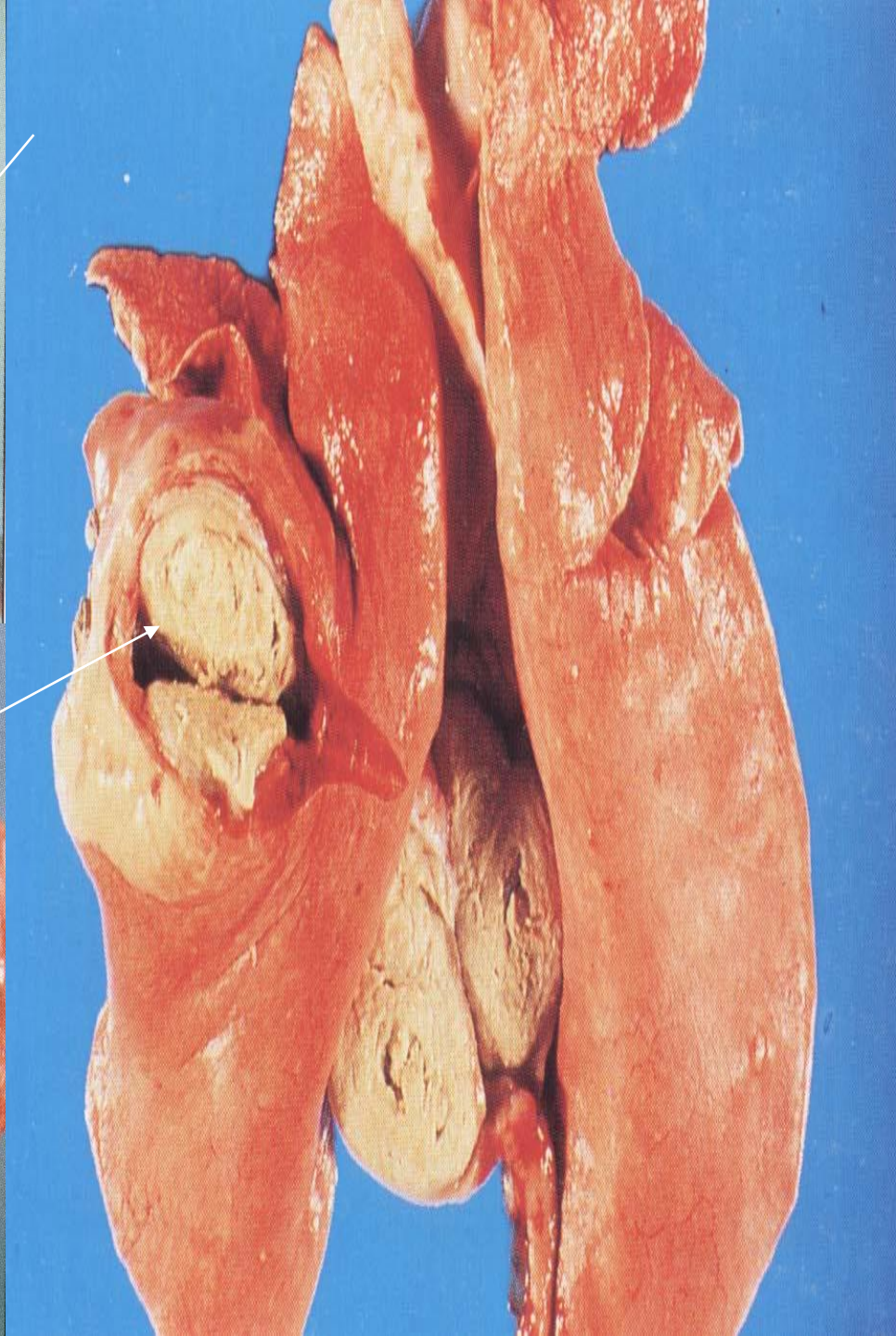
Pm















Treatment





Hygienic Treatment

- (1) Avoid overcrowding .
- (2) Correct anemia if present.
- (3) Easily digestible and palatable food
- (4) Injection of vitamin C and A to increase body immunity.
- Glucose and saline therapy.

Medical Treatment

- Broad spectrum antibiotic
- Ant inflammatory (St & Non St)
- Mucolytics & Bronchodilator
- Vitamin A &C
- Antihistaminic

Antibiotic used in pneumonia

1. **1-In less sever cases:**

1-Oxytetracycline drugs

2-Enerofloxacine

IN sever cases (Shipping fever):

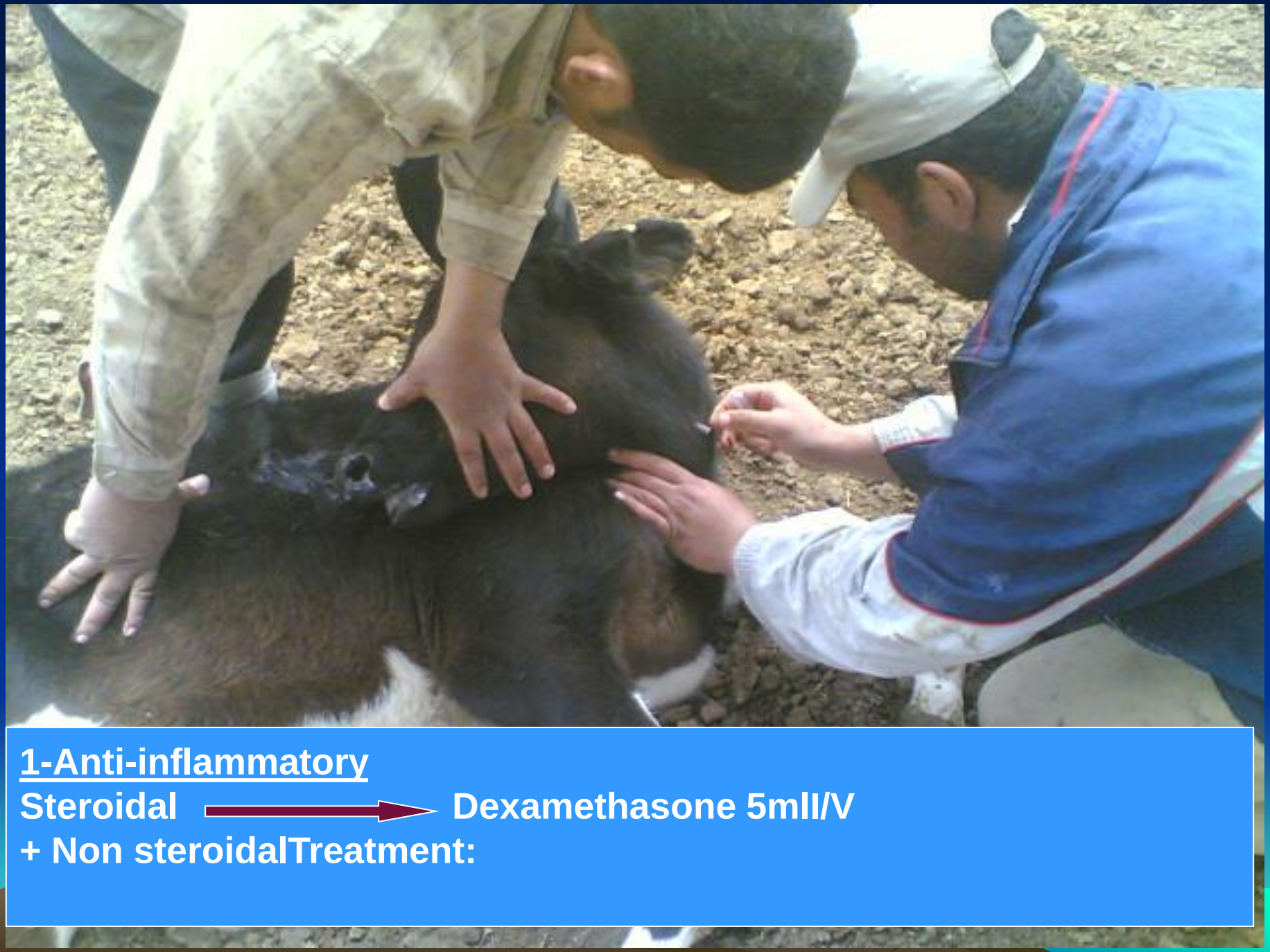
- **Marboflxacine**
- **Cephalosporion .**
- **Sulfa &Trimethoprime**
- **Flurphenicol**



Temperature:41.7C
Complete Loss of appetite
Difficult breathing



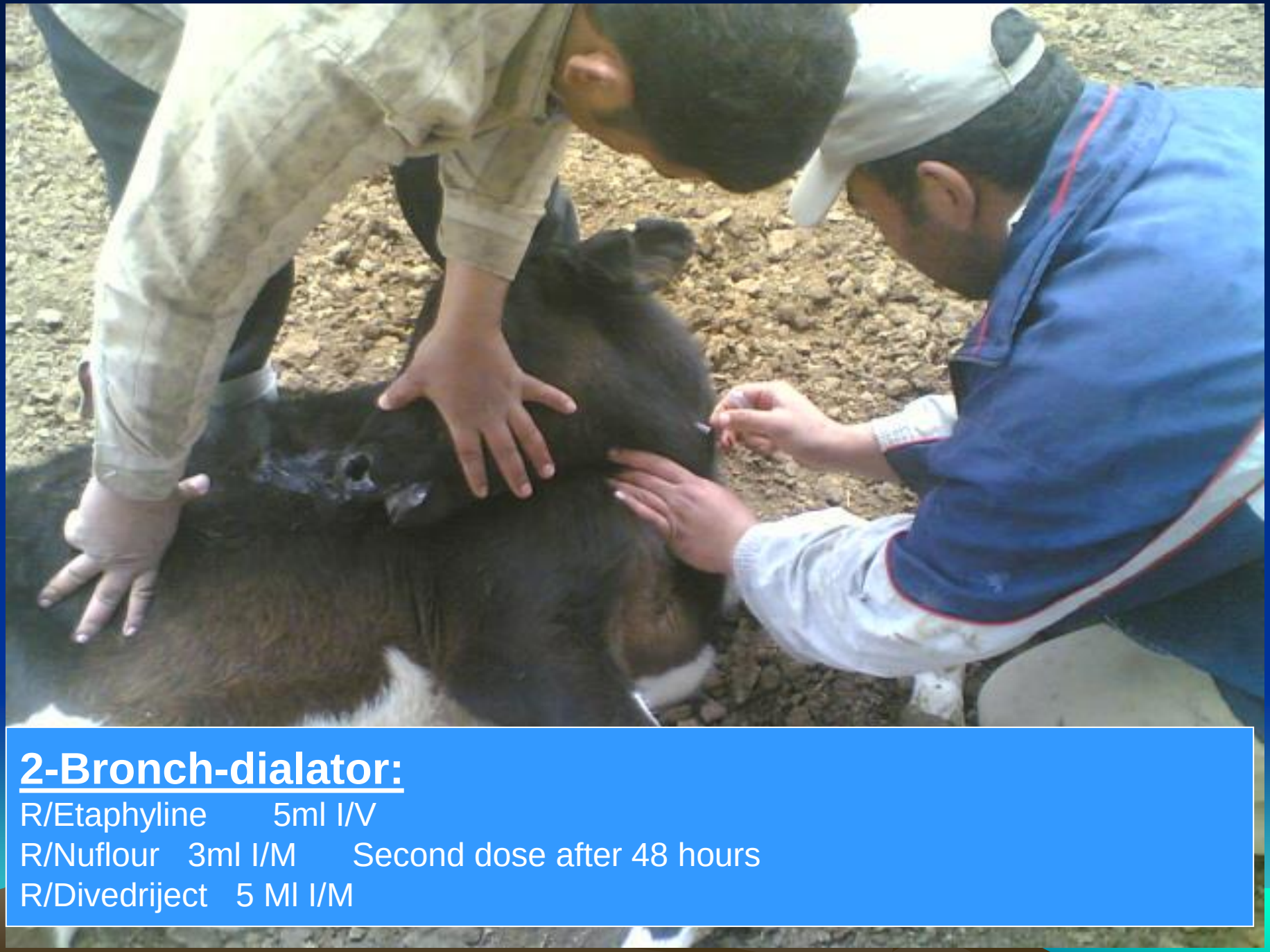
By auscultation: Moist Rales
Consilidation in some ares of the lung



1-Anti-inflammatory

Steroidal → Dexamethasone 5mlI/V

+ Non steroidalTreatment:



2-Bronch-dialator:

R/Etaphyline 5ml I/V

R/Nuflour 3ml I/M Second dose after 48 hours

R/Divedriject 5 Ml I/M



3-Broad-spectrum antibiotic

4-Multiviamines and minerals

Control and prevention of diseases of newborn animals

- **(1) Removal of the cause of diseases**
- Clean environment
- Swabbing of the navel with tincture iodine
- Disinfections of the uterus before conception is necessary also.
- **(2) Removal of the newborn from the infected environment:**

(3) Increasing the non – specific resistance of the newborn

- 1- Ingestion of colostrums from dam is so important as the only one source of immunoglobulin to newborn.
- Calf fed about 80 ml / kg body weight of colostrums at 6 hours of age.
- Special nutritional and housing requirements.
- Isolation of newborn calf in calf – rearing unit within few days after birth.
- Provision of suitable environment.

(4) Increasing the specific resistance of the newborn:

- Vaccination of dam before parturition to stimulate the production of specific antibodies which are then transferred to the newborn via the colostrums.

Bovine Vaccines

Viral vaccines

1. PNEUMO 3
2. PNEUMO 4
3. Cattle Master4
4. Vira Shield 5
5-Nasal Gene

Bacterial vaccines

1. Pneumo - Bac
2. Covexin* 8& 10
3 Ultrabac® 8

Mixed vaccines

1. Entero – 3 Vaccine
2. Scour Guard 3
3-Rotvec vaccine
4-Coli immune-oral

E Coli + Rota & Corana Virus


2009/04/24


2009/04/24

الطريقة الصحيحة لإرضاع السرسوب





١- استعمال زجاجة الرضاعة المعدة لذلك.

٢- إرضاع السرسوب علي يد عامل مدرب علي تلك المهمة.



٣- تفادي حدوث الالتهاب الرئوي الناتج عن التجريع.

رضاعة اللبن



•ارضاع العجول عن طريق الجردل يسبب مشاكل معوية و تنفسية.



• يجب ان تكون الرضاعة عن طريق الزجاجة ذات الحلمة المعدة لذلك.



• يجب ان لا تكون الحلمات المطاطية مشقوقة و لكن مثقوبة ثقب متوسط الحجم.

بعض الأخطاء التي تؤدي إلي مشاكل مرضية



١- قيادة العجل إلي الجردل و تعليمه الرضاعة عن طريق اصبع العامل.



٢- تربية العجول الرضيعة في جماعات.

٣- الإرضاع عن طريق مغذي العجول (Calf-feeder).

اتخاذ اجراءات النظافة العامة

* الأرضية يجب أن تكون نظيفة و جافة.







اتخاذ اجراءات النظافة العامة

* تغيير مكان بوكسات العجول يومياً.





اتخاذ اجراءات النظافة العامة



- غسيل أوعية الرضاعة بالماء الساخن و الصابون بعد كل وجبة.



اتخاذ اجراءات النظافة العامة

* تخزين حلمات الرضاعة في المطهر المناسب.





اتخاذ اجراءات النظافة العامة

* تخزين الزجاجات و أوعية اللبن في أشعة الشمس المباشرة بعد الاستعمال.






جزاك الله خيرا