

# COMMON DISEASES IN DAIRY CATTLE

## 1. Bloating

### a. Symptom

- Left flank bloat
- The feeling when touching on the left flank is like touching an inflated rubber ball
- Other symptoms: low appetite, no rumination, slobber, nervous, etc.

### b. Treatment:

There are many methods of treatment which base on release of air from the rumen and reduction of fermentation:

Reference methods:

- Put a catheter through oesophagus into the rumen to release inside air.
- Using hand to take feces out from the rectum and then pump water in to easily stool.
- Let the cattle drink bittern (3 – 5 l) mixing with beer (3 – 5 l), or permanganate 0.1% (3 – 5 l).
- Give magnesium sulfate 200g mixed with 3 l of clean water.
- Inject a troca from the left flank into the rumen to release air.
- Besides, we have to give care to keep the cow away from secondary disease.



Inflated left flank (acute-type bloat)



Chronic-type bloat



Treatment using rumen catheter

## 2. HEAT STROKE

### a. Symptom

- Fever: 41 -42<sup>0</sup>C
- Dry skin, bloody eye mucus membrane
- High pulse and respiratory rates.
- Convulsive

### b. Treatment

- Keep the cattle in cool and windy place; continuously irrigate cool water into the rectum.
- Spray cool water on the body and use fan.
- If the cow is convulsive or nervous, we have to take the blood out from the jugular vein to prevent congestion and lung edema.
- Medical treatment:
  - + Infuse NaHCO<sub>3</sub> 500ml
  - + Give drinking water mixing with NaHCO<sub>3</sub> in hot season
  - + Anagin 1ml/20kg weight
  - + Caffeine 1ml/20kg weight
  - + B-complex, Vitamin C
- Give 5 liter of green tea water (100 gram dried green tea or 500 gram fresh tea with one liter of hot water, add 500 gram of sugar + 4 liter of clean water). This method can help the animal to recover faster.



Open-mouthed breathing (panting)

#### **4. Poisoned diseases**

##### ***a. Symptom***

- + Acute type: slobbering, tearing, red eye, diarrhea in some cases, bloody feces.
  - If the toxic affects the nerve system, making the cow imbalance in action, crazy running, and round moving.
  - If the toxic affect on the respiratory, circulatory system, painful, fast pulse rate, cardiac collapsed and dies within 3 – 6 hours.
- + Chronic type: The cattle intakes a small amount of toxic chemical continuously in a long time. The chemical is accumulated in the body gradually, therefore pathological change occurs slowly and it is difficult to find the symptoms. Liver is the most affected and it will be depressed, causing chronic diarrhea.

##### ***b. Treatment***

- Find out the cause so that we can stop poisoning.
- Keep the cattle in windy and cool place in summer time, warm place in winter time
- Inject caffeine or camphor.
- Inject antianxiety
- Inject Vitamin K, Vitamin C
- Antitoxic: infuse salty serum solution or isotonic glucose 2l/100kg weight.
- Give Orezon solution for drinking: 20gr in 10 liters of water. Let the cattle drink as much as possible.

Other treatments:

- Treating bloating if have
- Treating diarrhea with antibiotics, ...

#### **5. TRAUMATIC PERICARDITIS**

##### ***a. Symptom***

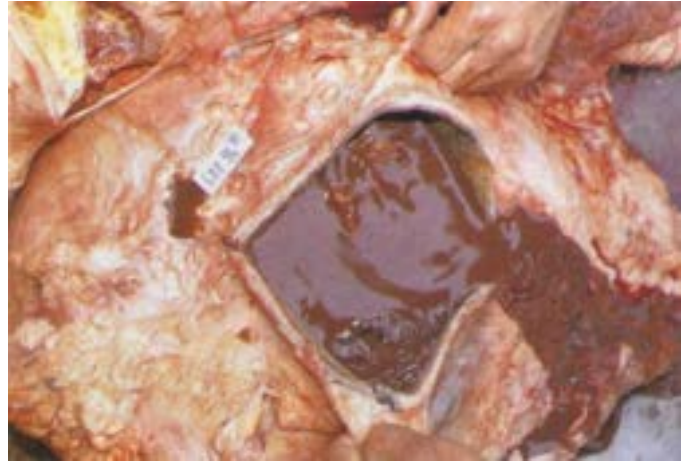
- Swollen jugular vein (typical symptom)
- Edema chest, bell (typical symptom)
- Fast pulse rate, unclear (abnormal) sound (like water inside)
- Light fever
- Low appetite, curved back.

### **1. Treatment**

- Give magnet to fix foreign body, to stop injuring omasum and peritoneum
- Antibiotics: Penicilin 15.000 UI/kg weight + Streptomycin 5-10mg/kg weight continuous in 7 days



Edema on chest and over-swelled jugular vein



Enlarged heart due to increase of inflammatory exudate in pericardial cavity





Rumen magnet attaching nails

## 6. BLOOD PARASITE

### 6.1. *Trypanosoma theileri*

#### a. *Symptom*

- Intermittent fever: getting fever only in the morning or afternoon in 1-2 days then stop 1-2 days before another fever.
- Because of the toxin secreted from the *Trypanosoma theileri*, the cattle show some nervous problems such as shivering, whirling.

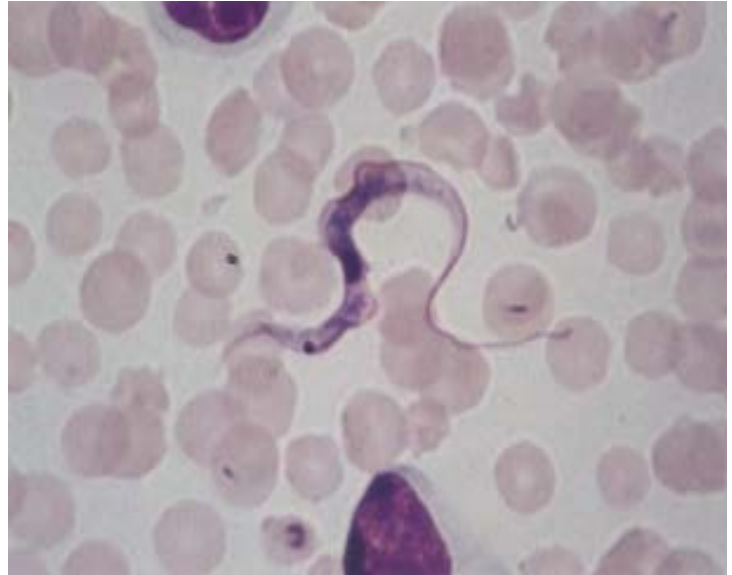
The cow gradually becomes thinner and thinner, anemia, milk yield drops.

#### b. *Treatment*

Muscle injection: Azidin 1,18g mixed in distilled water (one tube in 5-7ml distilled water), 1tube for 150-200kg body weight, once per day, continue treatment in 2 – 3 days.



Pale conjunctive resulted from anemia



*Trypanosoma theileri*

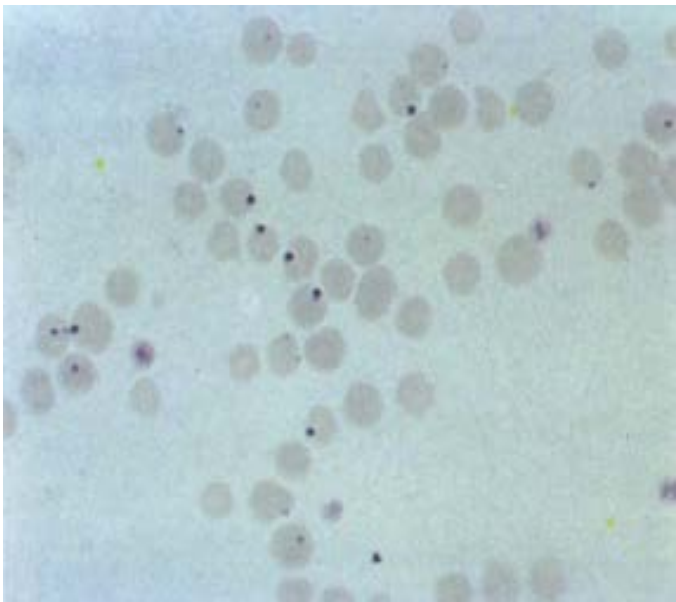
## 6.2. Anaplasmosis

### a. Symptom

- The parasite use nutrition, destroy RBC, makes the cattle thin and serious anemia.
- Eye and vagina mucus membrane is pale color.
- The toxin secreted from the parasite affects the central nerve system causing nervous symptoms

### b. Treatment

- Mix Rivanol 0,2 - 0,4g in 150ml water, after that steam and purify by filter paper. Cool the solution down to 40 – 45°C and mix again with 60-70ml of 90° surgical spirit, infuse in to the vein when the solution temperature is 36-37°C
- Blood transfusion: 1-2 liter of blood, once every 2 days, transfuse 3-4 times



*Anaplasma marginale*



Mucous membrane of vulva, light-yellowish color, resulted from anemia and jaundice

### 6.3. Babesiosis and Theileriosis

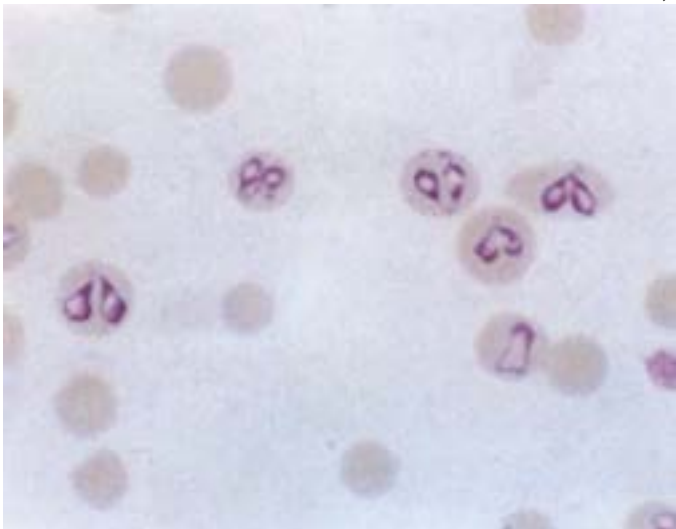
#### a. Triệu chứng

- Anemia: Pale conjunctive in eye membrane and vagina
- Continuous high fever 40-41,5°
- Bloody urine
- Lymph nodes are swollen, edema.

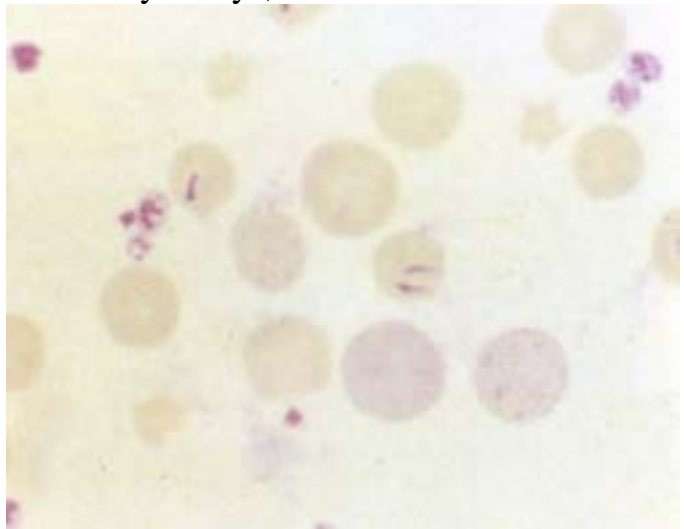
#### b. Treatment

##### Medication:

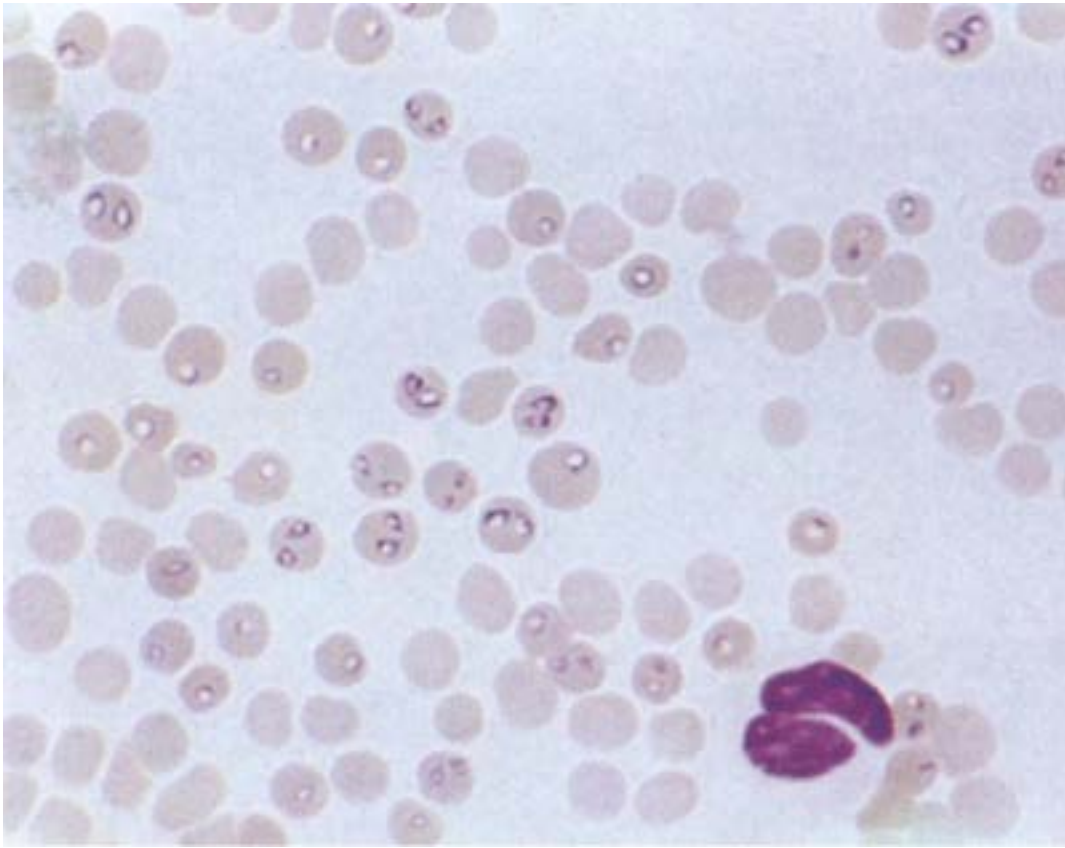
- Berenil: 1tube in 15ml of distilled water, muscle injection, 1tube/500kg weight
- Sangavet: 1 pack in 15ml distilled water, muscle injection, 1 pack/300kg weight
- Azidin: same dose as treatment of Trypanosis, treat in 2 -3 days
- Blood transfusion: 1-2 liter of blood, once every 2 days, transfuse 3-4 times



*Babesia bigemina*



*Theileria sergenti*



*Babesia bovis*

**Warning:** Before using medicine for blood parasite diseases, we have to inject caffeine, about 20 ml.

Besides, we should inject other medicine for health improvement, tonic, vitamins, caffeine (about 20 ml), give special care to prevent secondary diseases.

## **7. FACIOLOSIS**

### **a. Symptom**

- Hepatitis and liver injury
- The cattle is thin, fat tissue and muscle are atrophied
- Pale conjunctive, anemia, yellow skin
- Edema fauces, dewlap and under lower jaw
- Low appetite, low digestion, crushed feces

### **b. Treatment**

Medication: - Han-deptil B, oral drinking 1 tablet/50kg weight  
- Tolzan F, oral drinking 1 tablet/100kg weight

Give special care to the diseased cattle





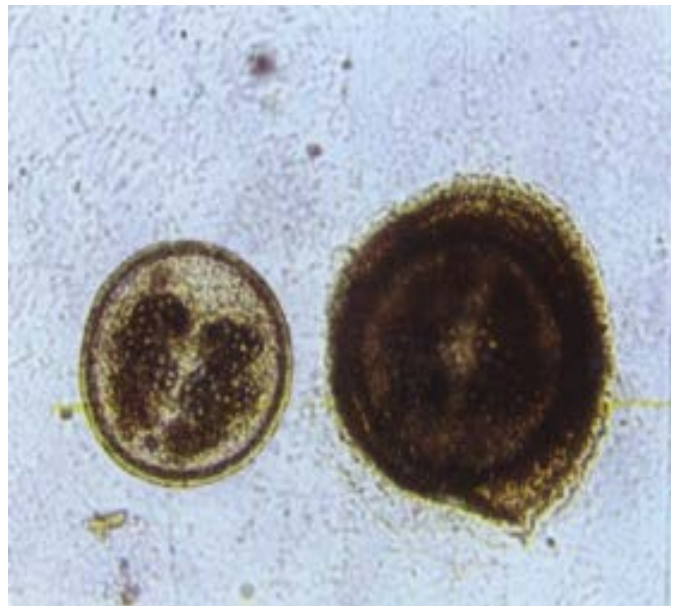
*Fasciola hepatica*



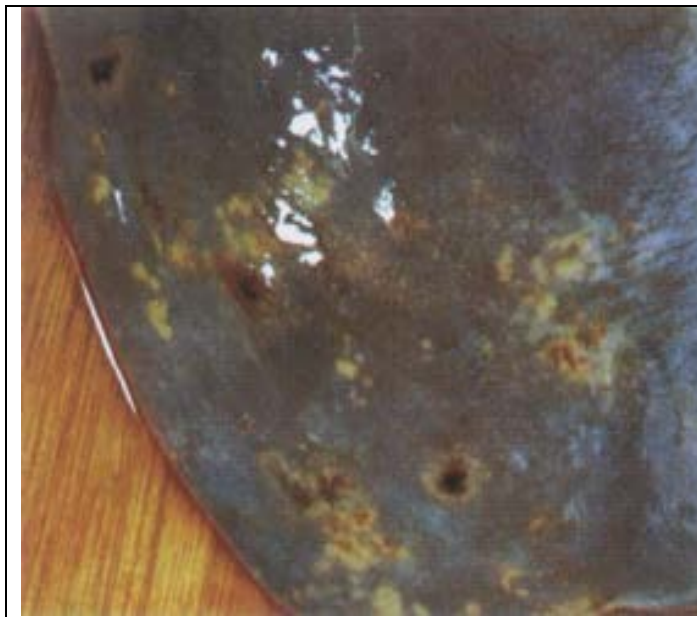
Heavily emaciated cattle with *Fasciola hepatica* infection



Eggs of *Fasciola hepatica*



Metacercariae of *Fasciola hepatica*



Numerous worm canals, yellowish-white lesions and hemorrhages due to destruction of tissues, seen on the surface of the liver



Marked thickness (like branches of trees) of common bile duct in the liver

## 8. CALF DISEASES

### 8.1. DIARRHEA

#### a. *Symptom*

- Drink a lot of water, low or no appetite, feed is stuck in the stomach causing bloating
- If caused by E. coli: feces is watery, from yellowish to white color, very bad smell
- If caused by Coccidiosis: thick feces, there is intestine mucous membrane in the feces, red or brown blood, bad smell.
- If caused by ascarid: Usually in 1 -2 month old calf, rough feces, whitish, very bad smell. Later diarrhea feces attaching to tail and legs.
- If caused by ell-worm: enteritis, yellow diarrhea, fast dehydration, depressed eye, shriveled skin. The calf may die for dehydration, depression if late treatment.

#### b. *Treatment*

- Give less feed or stop feeding the calf, reduce rich protein feed.
- Give Orezon, isotonic glucose as much as possible.
- Infuse NaCl 0,9% 1.000ml

+ If the cause is bacteria:

Antibiotic: Kanamycin, Tetracylin, Neomycin, Sulphamides, Ampicilin, Colistin... or other specific remedy for diarrhea available in market.

+ If the cause is parasite:

- Deworming: Levamysol 7,5%, 1 ml/10kg weight  
Hanmectin 25, 2ml/25kg weight

Besides, we can give some herb to help intestinal membrane recovery such as tea bud, guava leaf, ...



White diarrhea attaching to tail and legs



Severely depressed calf because of diarrhea

## 8.2. ASCARID

### a. Symptom

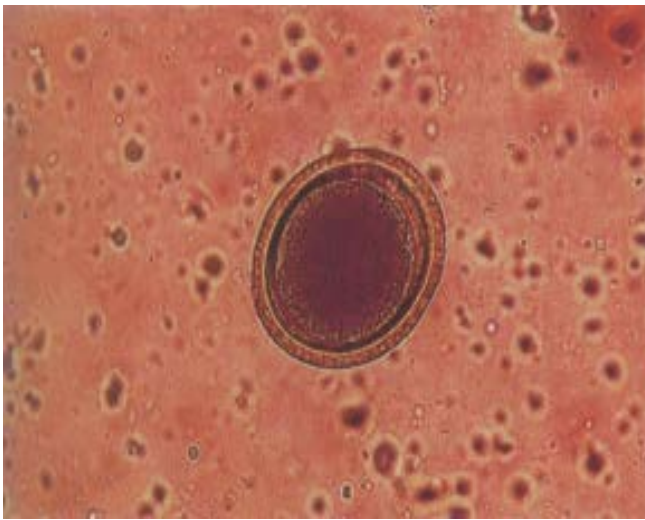
- Bellyache: the calf lies on her back, the rear legs kick into her belly and move like swimming.
- Sluggish action, glassy, lowered head, curved back, enlarged abdomen, low appetite and laying still.
- Diarrhea
- Watery feces; at the beginning the feces is grey later whitish; and very bad smell.

### b. Treatment

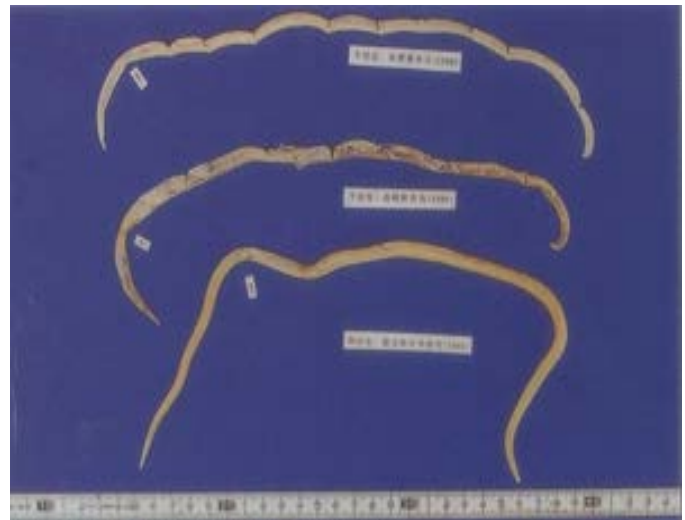
Medication:

- Tayzu: oral drinking, a 4g pack /20kg weight
- Han mectin 25: injection, 4ml/50kg weight
- Levamisol 10% injection, 1ml/10kg weight
- Han-Deptil B: oral drinking, 1tablet/50kg weight





Eggs of *Toxocara vitulorum*



*Toxocara vitulorum* (female, 2 upper) và *Ascaris suum* (1 below)

### 8.3. LUNG WORM IN CALF

#### a. Symptom

Caused by string worm parasitizing in treache and bronchi.

- Usually on 3 – 6 month old calf
- Coughing, depressed respiration, nasal discharge (sometimes with blood)
- Glassy, high respiration, drink less water.

#### b. Treatment

- Hanmectin 25, injection, 4ml/50kg weight
- Mevenbet or Levamisol, injection, 2ml/10kg weight



A number of lungworms seen in the trachea



Adult *Dictyocaulus viviparus* (The left 2 are male and the right 2 female)





Husky coughing of infected cattle, as to blow off a foreign body in the trachea

## 8.4. COCCIDIOSIS

### *a. Symptom*

- Usually on 2 – 4 month old calf
- Coccidiosis injure endointestinal hair and intestinal wall muscle and mucus membrane, therefore the calf has bloody diarrhea with some mucus membrane.
- Curved back, tail up, little feces.
- Coccidiosis secrete enzyme and toxic chemical making the calf shiver, fever and secondary diseases.

### *b. Treatment*

Medication:

- Han-Pisepton, oral drinking, 5g/10kg weight
- Hancoli-Forte, oral drinking, 2g/10kg weight
- Gentacostim, 2g/10kg weight

Besides, we can use antibiotics for preventing intestinal bacteria; or herbs such as tea bud, guava leaf to recover the intestinal membrane.



*Eimeria bovis*, oocyst



Bloody stool due to Coccidiosis

## 8.5. PNEUMONIA

### *a. Symptom*

- Fever 40-41°C
- Glassy, exhausted, no appetite, tearing, nasal discharge
- Depressed respiration, abnormal breathing sound
- Coughing, especially in night time and early morning.

### *b. Treatment*

Because this is a bacteria disease, we use antibiotics for treatment:

- Penicilin 15.000 UI/kg weight + Streptomycin 5-10mg/kg weight
- Kanamycin 1ml/10kg weight
- Ampi-kana 10mg/kg weight
- Tylosin 1ml/10kg weight
- Gentamycin 6-8ml/100kg weight

Muscle injection, continue in 3-5 days, twice a day.

Besides, we can additionally treat with anti-fever, caffeine, etc.



Calf with nasal discharge

## 8.6. NAVEL INFECTION

### *a. Symptom*

- Usually on 5-7 day-old calf
- The calf drink little or no milk
- Navel part is swollen, painful

### *b. Treatment*

- Disinfection the navel part
- Antibiotic: - Gentamycin 6-8ml/100kg weight
  - Tetramycin LA 1ml/10kg weight

Muscle injection or underskin injection near the inflamated part, continuously in 3-5 days



Poly arthritis caused by navel inflammation



Navel part with fetid exudate and pus



Hardened and swelled navel part, inflammatory exudate attached to the base of the navel string

## 9. PASTEURELLOSIS

### *a. Symptom*

- High fever: 41-42°C
- Eye and nasal mucus is redish. Later brown
- Tearing, nasal discharge, husky coughing, coughing fit.
- Depressed respiration and high presure
- At the begining, the feces is constipated but later become bloody diarrhea
- Much mucus and underskin bleeding
- Exhausted, low rumination
- Mortal rate is high therefore we have to vaccinate regularly.

### *b. Treatment*

The cause is Gram (-) bacteria, we can use following antibiotics:

- Penicinin mixing with Streptomycin



- Kanamycin
- Gentamycin
- Tylosin.....

Continue in 3-5 days, dose is the same as it for treatment of pneumonia

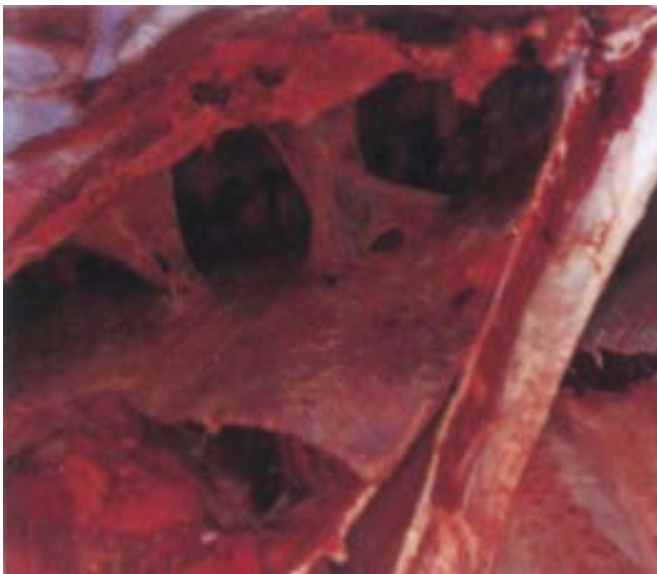
We can additionally treat with anti-fever, vitamins, caffeine and special care.



Cattle showing depression, with mucous or purulent nasal discharge



Thickening of pleura aheading to the thoratic serosa



Pneumonic lesions asociated with adhesive pleurisy



Pneumonic lesions showing reddish hepatization from anterior lobes to 1/3 of posterior lobes of the lungs



## 10. MASTITIS

This is one of the biggest problems causing big economic loss in dairy farming

### *a. Symptom*

Symptoms of mastitis are very different, depending on the causes, types of bacteria and level of infection:

- Udder temperature: hot
- Udder size: swollen
- Udder color: reddish
- When we touch the udder, the cattle feel painful
- We can also see the changes in physical and chemical performance of milk; lumpy or stringy, bloody, pussy milk

### *b. Treatment*

Depending on type of bacteria, the cause we select suitable medicine:

- Cloxacilin 200g + Ampicillin 75mg, pump into the teat once per day, in 3 -5 days continuously
- Penicillin 100.000UI + Streptomycin 1g, pump into the teat once per day, in 3 -5 days continuously
- Mastijet Fort, Cloxaman, pump into the teat, 1 tube/teat, once per day, in 3 -5 days continuously
- Hanocilin: Muscle injection or under skin injection 1ml/10kg weight, in 3 -5 days continuously
- Hancoli: Muscle injection 1ml/10kg weight, in 3 -5 days continuously
- Tetramycin \*LA: Muscle injection 1ml/10kg weight, in 3 -5 days, continuously

Notice: Before pumping antibiotics, we have to remove all milk out.

For dry cow, beside above drugs, we can use following medicine:

- Penicillin 100.000UI + Kanamycin 1g: pump into the teat once per day, in 3 -5 days continuously
- Procacium penicillin 10.000UI + Furaltadone 500mg: pump into the teat once per day, in 3 -5 days continuously
- Beside antibiotics we can use vitamins and other tonic medicines and keep the cow in clean place.

Especially, if the cause is fungi or Mycoplasma, antibiotics will not be effective. For treatment of these cases, have to keep the cattle in hygiene environment and do milking 5 – 6 times a day continuously until it recovers.



Swelling of right udder accompanied with pain fever and stiffness seen in mastitis of heifer.



Necrotic mastitis; marked swelling with violet-reddish color changes in right hindquarter



Burst abscess in the left hind quarter of a cow with chronic mastitis

## 11. TUBERCULOSIS

Chronic disease caused by *Mycobacterium tuberculosis*.

It is dangerous for people who drink milk of cow with TB for they may be infected with TB.

### a. Symptom

Depending on organ infected and seriousness, symptoms may be different.

- Pulmonary TB: The TB bacteria invade in the bronchi, trachea and/or larynx make the cow has husky cough, coughing fit with sputum (but later the cattle usually eat that sputum again). The cattle usually cough in early morning, late in the afternoon and in cold day. The cattle is thin; hair is shed and erect; low appetite, low rumination, slight fever, fever is irregular.
- Intestinal TB: long time diarrhea, very bad smell feces; after diarrhea finished, the cattle is constipated; the cattle becomes thinner and thinner.
- Lymph TB: lymph node is swollen, hard; when we touch we can feel some tumors (as big as a chicken egg), no pain, the tumor do not attach to the skin; when we open, we can find tofu-like tumor.
- Udder TB: The udder and teats is deformed, when we touch we can feel roughness, mammary lymph nodes are swollen, hard and rough. Milk yield drops.

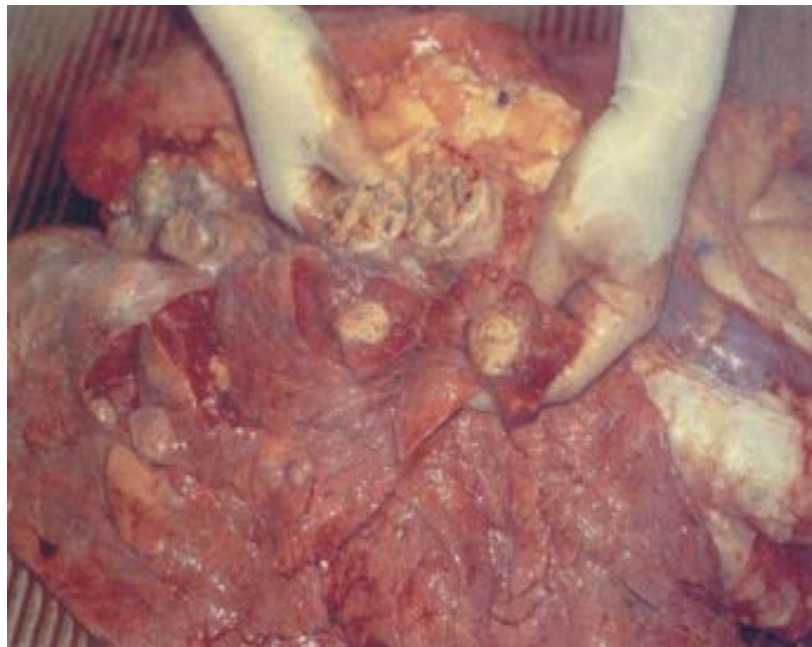
### b. Treatment

Antibiotics treatment:

- Kanamycin: muscle injection, 2ml/15kg weight, once/day, continue in 5-7days
- Streptomycin: muscle injection, 1g/50kg weight, once/day, continue in 5-7days
- Ampicillin: muscle injection, 1ml/10kg weight, once/day, continue in 5-7days

We can additionally inject vitamins, tonics, caffeine, ...

When we find TB cow, we should kill immediately to prevent from infecting to human, other cattle and animal.

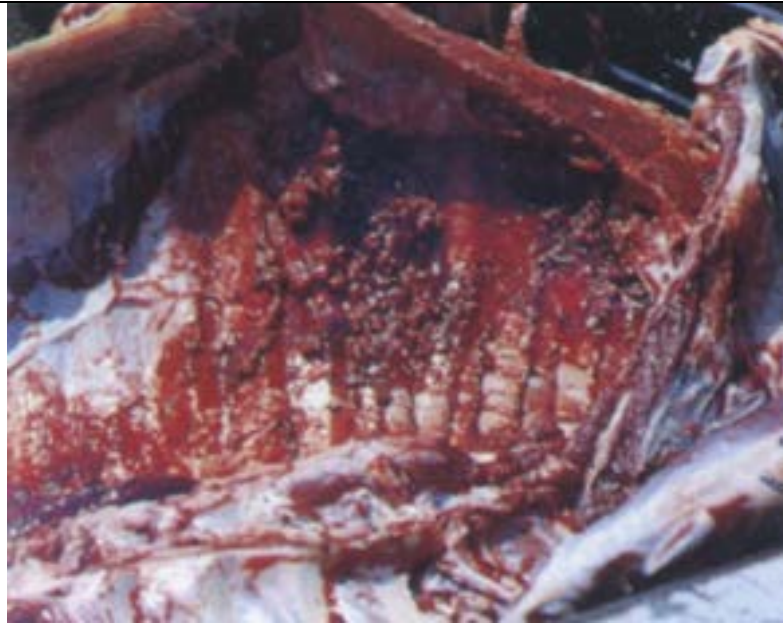


Positive reaction of Tuberculin Test:  
marked swelling of the caudal fold

Marked enlargement of pulmonary lymph nodes and yellow-whitish  
nodular lesions



Yellow-whitish nodular lesions of the liver



Pearl-like lesions seen on pleura in the thoracic cavity

## 12. FOOT AND MOUTH DISEASE

### a. *Symptom*

- Fast spreading disease
- High fever 40-41<sup>0</sup>C, low appetite, like drinking much water
- At the beginning, the mouth is swollen, close tightly and has crackling sound
- 2-3 days after, vesicles appear on mouth, foot, leg and udder.
- Hard moving
- The reddish nodes appear on broken vesicle. Injuries may result in inflammation and secondary diseases.

### b. *Treatment*

Because this is a viral disease, to date there is no effective cure  
Annual vaccination is the best measure to prevent FMD disease.





Excessive salivation and ulcerative lesions  
on the tongue and the nasal cavity



Ruptured vesicle (blister) on the tongue, the lower gum and  
lip



Ulcerative lesions on the foot