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Judgment of the Parasitic diseases (1)

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Lung worms

Dictyocaulus viviparus is a lung worm in cattle causing verminous pneumonia or bronchitis,



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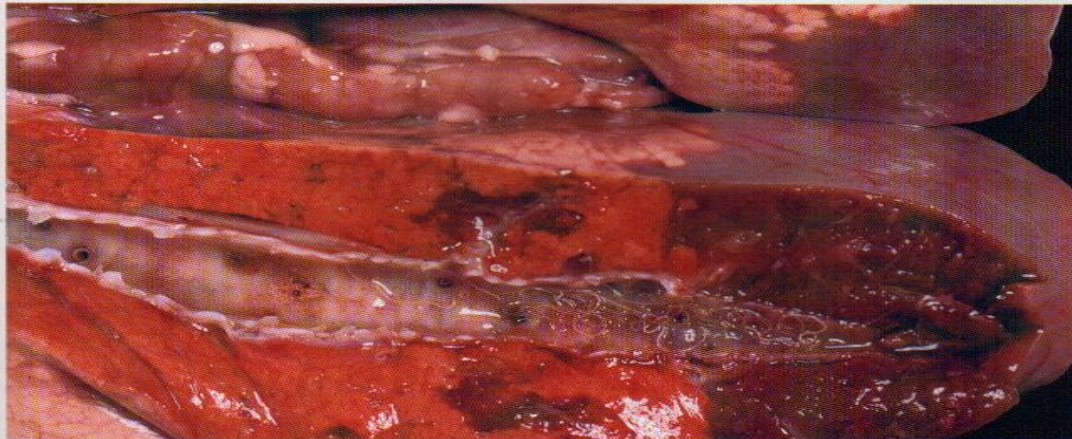
Post mortem findings:

- Haemorrhagic inflammation of bronchi with froth
- Lung edema and emphysema
- Consolidation of lung parenchyma
- Lung worms
- Enlarged lung lymph nodes



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3.125 - Verminous bronchitis and pneumonia. Adult forms of *Dyctiocaulus filaria* lodge in the bronchial lumen, causing local inflammation and blockage; as a result, obstructive atelectasis, visible as violet-red patches at the lung edge, is a common finding.



3.126 - Pulmonary hydatidosis. Hydatid cysts are frequently found in the lung, where they tend to protrude and become calcified. Viable cysts are firm but flexible.



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Judgement :

Carcass of animal affected with lung worms is *approved* if infestation is slight and no secondary changes are observed. *The lungs are condemned* .
The *carcass is condemned* if lung worm infestation has caused pneumonia which is accompanied with emaciation or anaemia.



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Fascioliasis

is caused by different liver flukes .

Fasciola hepatica is the most widespread in distribution .

Fasciola gigantica in Africa ,

Fasciola magna found namely in North America



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Postmortem findings:

- **Emaciated, anaemic or edematous carcass in severe chronic infestations**
- **Presence of flukes in enlarged and thickened bile ducts**
-
- **Calcification of bile ducts**
- **Haemorrhagic tracts of migratory immature**
- **Black lymph nodes of the lungs and liver due to fluke excrement**
- **Icterus due to liver damage**



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Judgement :

Judgement depends on the extent of the fluke lesions and the condition of the carcass.

Severe infestation

Mild, moderate and heavy infestation without emaciation may have a *favourable judgement* .

If the parasitic lesions in the liver are clearly circumscribed, the liver *may be salvaged* after trimming of affected tissue. Otherwise it is *condemned*.



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Oesophagostomiasis

(Pimply gut, Nodular worms)



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Oesophagostomiasis is a parasitic disease of ruminants and swine .

Oesophagostomum radiatum is found in cattle ,
Oesophagostomum columbianum in sheep
Oesophagostomum dentatum in swine.



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The larvae which penetrate into deeper mucosal layers provoke an inflammatory reaction and nodules of “pimply gut” .

O. columbianum in sheep may cause extensive formation of nodules which may become suppurative and may rupture.



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Postmortem findings:

- Greyish white nodules ranging in size from a pinhead to a pea , The nodules may contain a greenish pasty material in younger lesions or a yellow brown crumbly material in older lesions**
 - Thickening of the intestinal wall**
 - Local peritonitis**
- Mild inflammation of intestine in the acute stage -**
- Chronic inflammation of colon in the chronic stage**



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Judgement :

Intestines affected with nodular worms are *condemned*. The carcass is also *condemned* if severe infestation of this parasite is associated with emaciation and edema. Mild, moderate and heavy infestation without emaciation may have a *favourable judgement*.

However, intestines should always be condemned as they cannot be used for sausage manufacture.



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Cysticercosis



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Bovine cysticercosis is caused by *Cysticercus bovis* , which is the cystic form of the human tapeworm *Taenia saginata*.

Transmission : Infection in man occurs following consumption of raw or undercooked beef containing viable cisticerci. Cattle become infected by ingestion of feedstuff containing ova passed from infected humans.

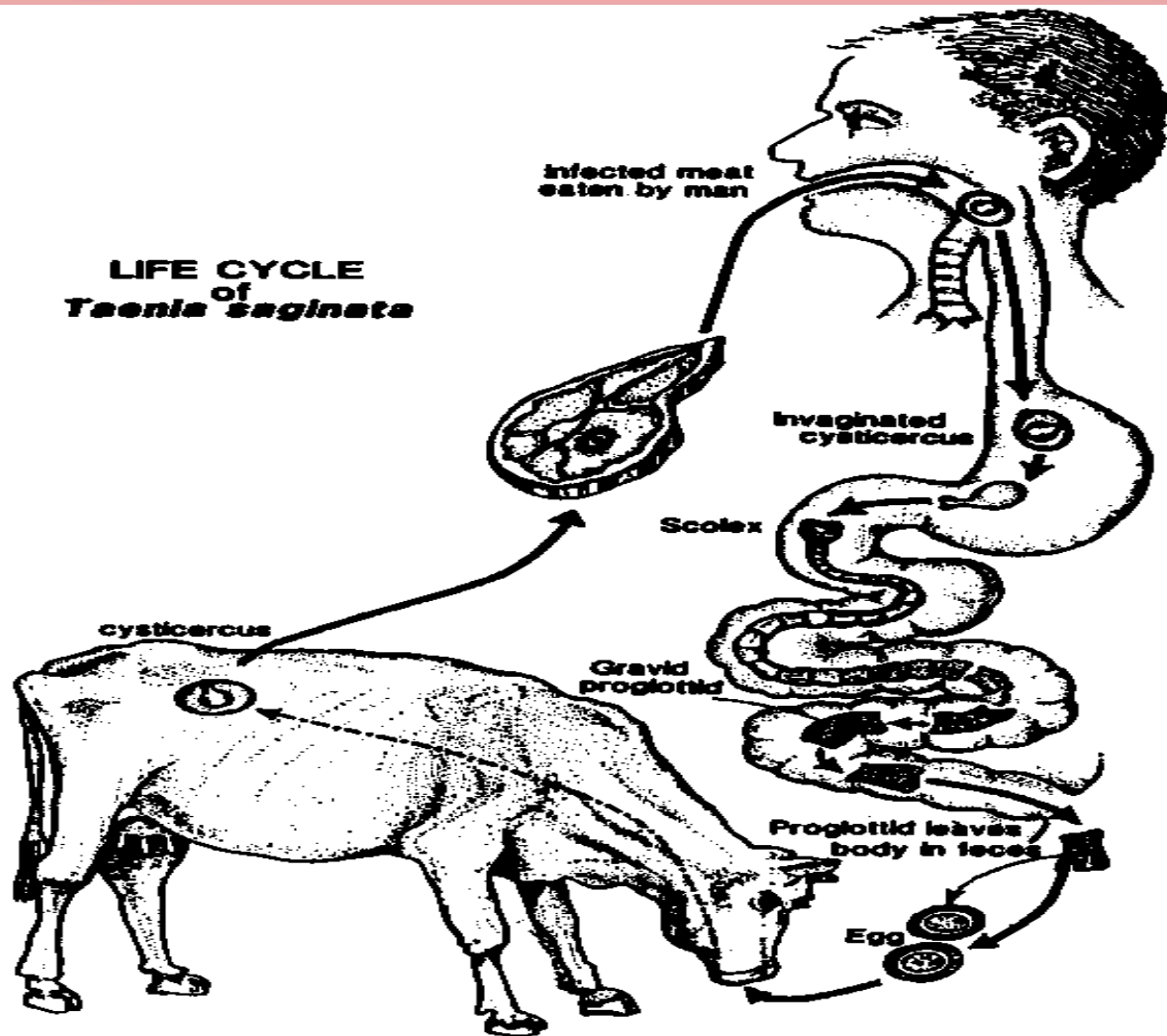


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LIFE CYCLE of *Taenia saginata*





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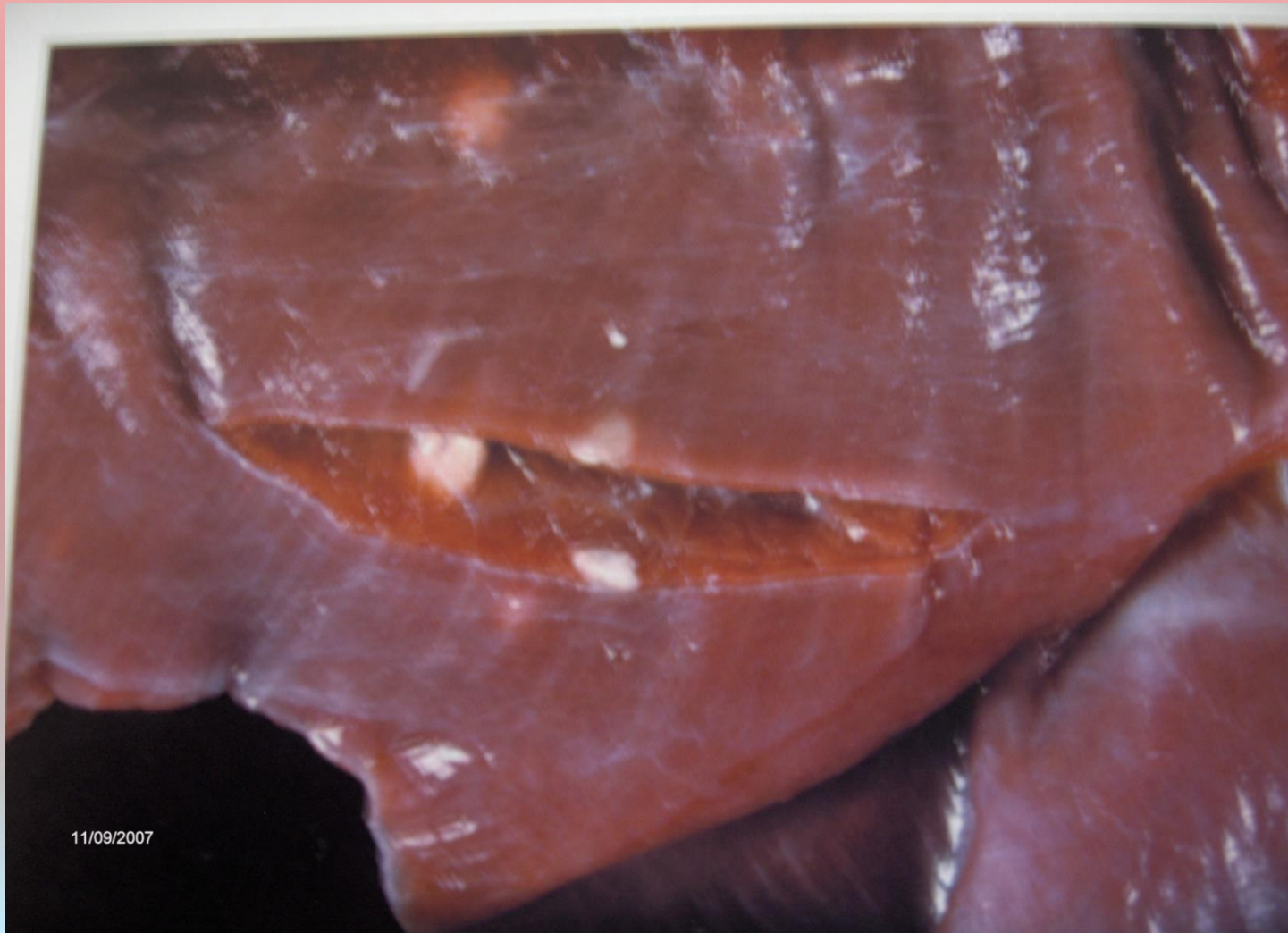


Postmortem findings

- Small white lesions in muscle tissue
- Clear transparent bladders 5 × 10 mm (infective cysticerci)
- Opaque and pearl like
- Degeneration, caseation and calcification (after 12 months or more after infection)
- Degenerative myocarditis



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Judgement :

Carcass and viscera of heavily infested animals are *condemned* and those with light infestation should be treated either by *boiling* or *freezing*.

The extent of “heavy infestation” is prescribed by the controlling authority. An animal is commonly considered heavily infected, if lesions are discovered in two of the usual inspection sites including the masseter muscles, tongue, oesophagus, heart, diaphragm or exposed musculature and in two sites during incisions into the shoulder and into the rounds.



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Generalized infection according to Canadian regulations means 2 or 3 cysts found on each cut into the muscles of mastication, heart, diaphragm .

In moderate or light infestation consisting of a small number of dead or degenerated cysticerci, the carcass is held depending on the existing country regulations for approximately *10 days at -10° C.*



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Hydatid disease Hydatidosis, Echinococcosis

Hydatid disease in cattle is caused by the larval stages of the 2–7 mm tape worm *Echinococcus granulosus* which lives in the intestines of dogs and other carnivores .

Hydatidosis in domestic ruminants inflicts enormous economic damage due to the condemnation of affected organs and lowering of the meat, milk and wool production.



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Antemortem findings

None of significance

Postmortem findings:

Hydatid cysts as described are found in:

Liver, heart , lungs, spleen, kidneys Muscle and brain

Any tissue including bone



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Judgement :

Carcass showing emaciation, edema and muscular involvement is *condemned* and destroyed. Otherwise the carcass is *approved*.

Affected viscera and any other tissue are also *condemned* and destroyed. Burying of carcass is not sufficient, since dogs may retrieve the affected organs.