Subjects

Animal Health

Disease Cards

- Bluetongue
- Contagious bovine pleuropneumonia (CBPP)
- Contagious caprine pleuropneumonia (CCPP)
- Sheep and goat pox (SGP)

Zoonotic Diseases

- Anthrax
- Avian Influenza
- Botulism
- Bovine Spongiform Encephalopathy - BSE [Spanish only]
- Brucellosis, bovine
- Brucellosis, ovine/ caprine
- Cysticercosis (bovine)
- Cysticercosis (porcine)
- Escherichia coli [Spanish only]
- **Hydatid disease**
- Leptospirosis
- Listeria monocytogenes [Spanish only]
- Q fever
- Rabies
- Rift valley fever (RVF)

ANIMAL HEALTH DISEASE CARDS

Hydatid disease (Hydatidosis, Echinococcosis)

also in the AGA website...
- Veterinary Public Health
- Software Downloads

Hydatid disease in cattle is caused by the larval stages of the 2-7 mm long tape worm Echinococcus granulosus, which lives in the intestines of dogs and other carnivores. Several strains of E. granulosus exist, the cattle/dog strain is primarily responsible for hydatid disease in cattle. In Africa hydatid disease is reported more commonly in cattle that are communally owned or are raised on free range, and which associate more intimately with the domestic dogs. Hydatidosis in domestic ruminants inflicts enormous economic damage due to the condemnation of affected organs and lowering of the meat, milk and wool production.

Life cycle

The infective eggs containing the oncosphere passed in the faeces are accidentally ingested by cattle, sheep, pigs, other animals or humans which act as a intermediate hosts. After the infective eggs are ingested by these intermediate hosts, the oncospheres in the eggs penetrate the intestine and reach the liver, lungs and other organs including the brain and muscles to develop into hydatid cysts at the end of about five months. These cysts measure commonly 5 - 10 cm and contain fluid. Some may reach up to 50 cm in diameter.

Others may produce daughters cysts. The diagnostic features of a hydatid cysts are a concentrically laminated thick outer layer within which is a germinal layer. In fertile hydatids the germinal layer is granular and has brood capsules each containing protoscoleces. When brood capsules become detached and float free in the cysts fluid they are referred to as hydatid sand. In some animals a fair proportion of hydatid may be sterile.

The life cycle is completed when a fertile hydatid cyst is eaten by a definitive host, the dog or the appropriate carnivore. Cattle and majority of intermediate hosts show no clinical evidence of infection. However, in humans hydatid cysts can cause serious disease.

Ante-mortem findings

None of significance

Post-mortem findings

Hydatid cysts as described are found in :
1. Liver, heart, lungs, spleen, kidneys
2. Muscle and brain
3. Any tissue including bone

Judgment

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.

Hydatid cysts in bovine heart.
Note the detached germinal layer

- Sarcocystosis
- Toxoplasmosis
- Trichinosis
- Tuberculosis

Comments: AGA-Webmaster