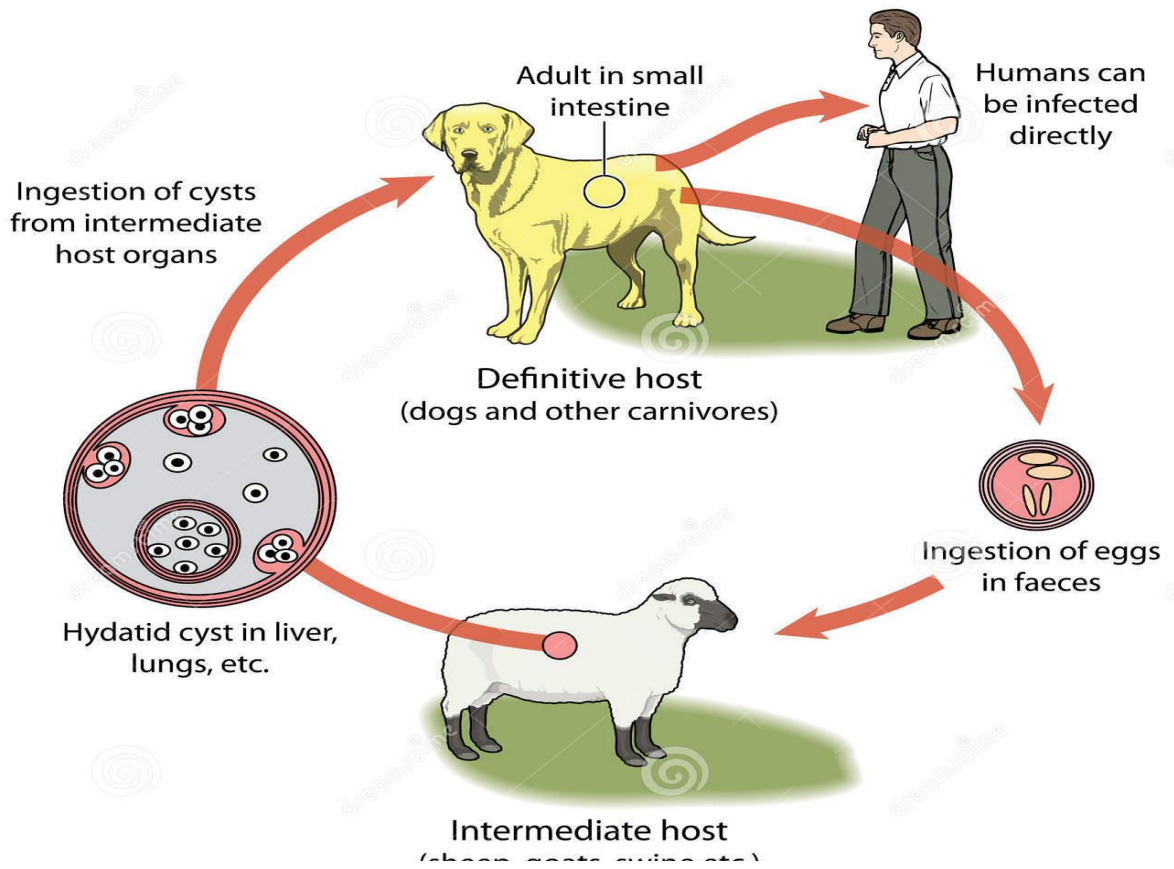
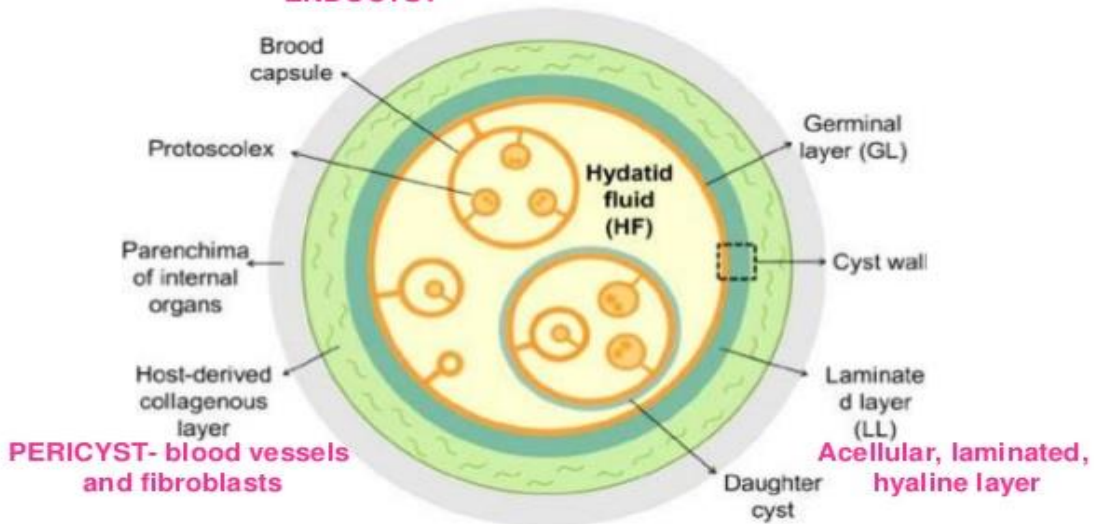


HYDATID CYST



The cyst wall secreted by the embryo consists of 2 layers

ECTOCYST
ENDOCYST



or pale yellow . Antigenic and hence used for Casoni Test (immediate hypersensitivity skin

*

Akriti Sah

Hydatid Cyst

* **Aetiology:**

- Infection by tape worm *Echinococcus granulosus*.
- The adult worms live in the intestine of dog (***definitive host***) → ova pass in faeces of dogs → contaminates food of the ***intermediate hosts*** (**sheep, ox, pig or accidentally man**) → ova penetrate the portal blood vessels → usually to the liver (75%) and less commonly lungs, brain or bones → Dogs are infected by **eating the diseased organ**.

* **Pathology:**

- Usually **solitary** and most often in the **right lobe**.
- A cyst develops which grows **slowly** and **differentiates** into:
 - 1. Adventitia:** an outer fibrous layer formed by the host tissue.
 - 2. Ectocyst:** (laminated membrane) in the middle. It is whitish and elastic.
 - 3. Endocyst:** An inner single germinal layer of cells which secretes hydatid fluid.

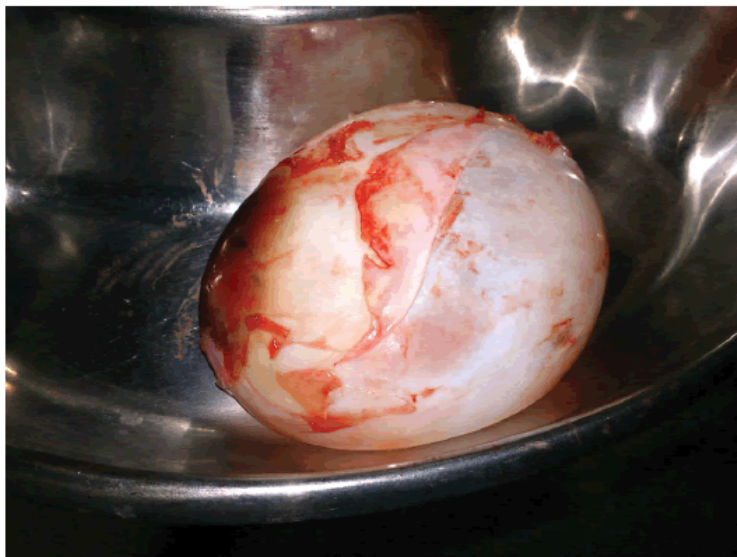
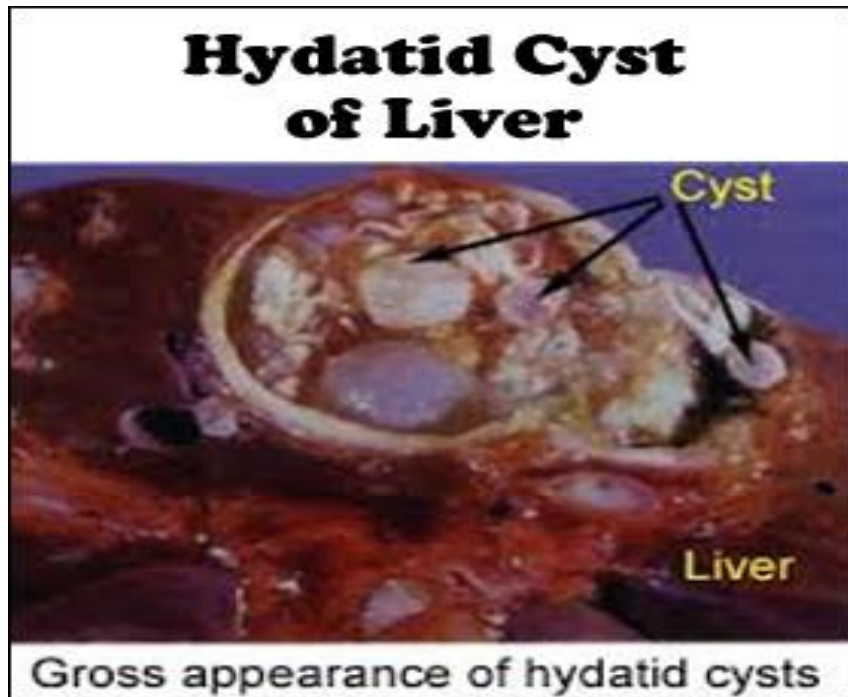


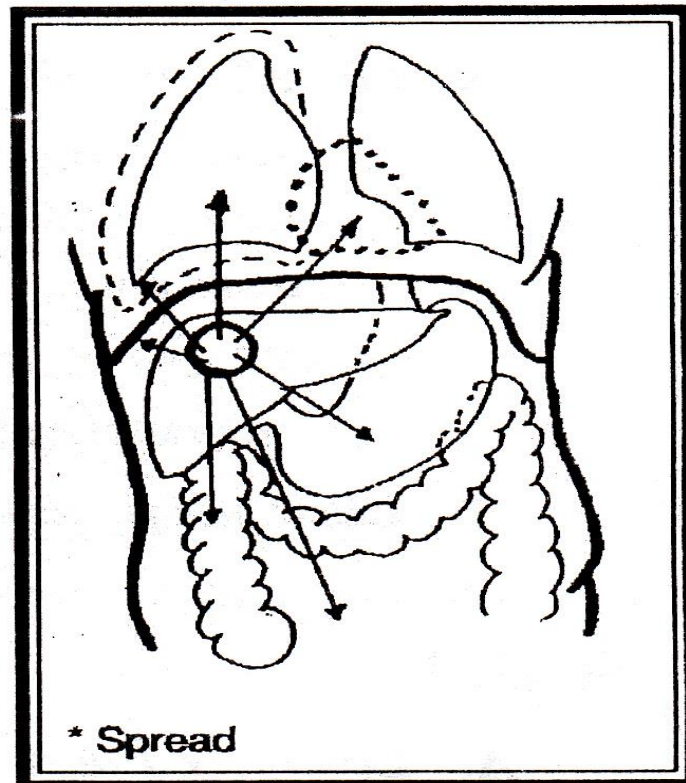
Figure 6 Surgically removed intact, encapsulated hydatid cyst.

4. **The cyst is filled** with clear **fluid** containing scolices of future worms, brood **capsules** formed by endocyst & **daughter cysts**, (free separated brood capsules).



* **Complications:**

1. **Secondary infection** → pyogenic liver abscess.
2. **Rupture** of the cyst into:
 - **Biliary tract** → O.J. and colic.
 - Peritoneal cavity → dissemination and anaphylaxis
 - **Pleura** → empyema.
 - **Lung** → bronchopleural fistula.
 - Bowel or death and calcification → mean the cyst is inactive , infertile with **spontaneous cure and no treatment is needed.**
 - **Blood stream** → anaphylaxis and systemic echinococcosis.



* Clinical Picture:

1. **Small** cysts are **symptomless** & may be discovered **accidentally** during **U/S** or **CT scan** .
2. **Painless**, well-defined, fluctuant **abdominal swelling** with **hydatid thrill on percussion** due to vibration of daughter cysts.
3. **Dull aching pain** in the right hypochondrium and right shoulder.
4. **Attacks** of urticaria with eosinophilia and dyspepsia.
5. **Manifestations of complications.**

* Investigations:

1. **Ultrasonography and C.T. scan** (the most important).
2. **Casoni's test is not reliable** .

3. **ELISA or complement fixation test** which detect hydatid antibodies in the serum are the sure diagnosis.

* **Treatment:**

I. Small asymptomatic cysts need just follow up by u/s and C.T. scan.

II. Laparoscopic Surgery: is the standard treatment for large symptomatic cyst .

a) Excision after sterilization of the cyst contents:

- The liver cyst is surrounded by **dark green towels** (allows visualization of any spilled scolices) that are moistened with hypertonic saline or betadine.
- The cyst is first **aspirated and hypertonic saline is injected.**
- The overlying liver substance and the surrounding adventitia are incised, and the double layered cyst is easily enucleated.
- **The cavity** left by a large cyst is filled with omentum.



b) **PAIR :**

- It is a recent line of consists of **P**uncture , **A**spiration , **I**njection of hypertonic saline and **R**easpiration .
- It can be used as a **substitute or complementary** to surgery .

c) ***Partial hepatectomy:*** for easily accessible large or multiple cysts.

III. Medical treatment: Mebendazole or albendazole are not substitute for surgery.

- **Indications:** Unfit patient or recurrent cases , pre & post-operative to prevent recurrence.

