

# **Hydatid Cyst of the Liver**

## **and its management**

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**AGNIBHO MONDAL**

**8<sup>TH</sup> SEMESTER, MBBS**

**R. G. KAR MEDICAL COLLEGE AND HOSPITAL**

# Why it is important

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**Common in Asia, Africa, Europe, the Middle East, Central and South America.**

**In India common in sheep raising communities.**

**Common in Andhra Pradesh, Sourashtra and Tamil Nadu.**

**Complications of hydatid cysts of the liver may be life threatening.**

# Pathology

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OF HYDATID CYST OF THE LIVER



# Causative organism

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*Echinococcus granulosus*

- Also called Cystic echinococcosis

*Echinococcus multilocularis*

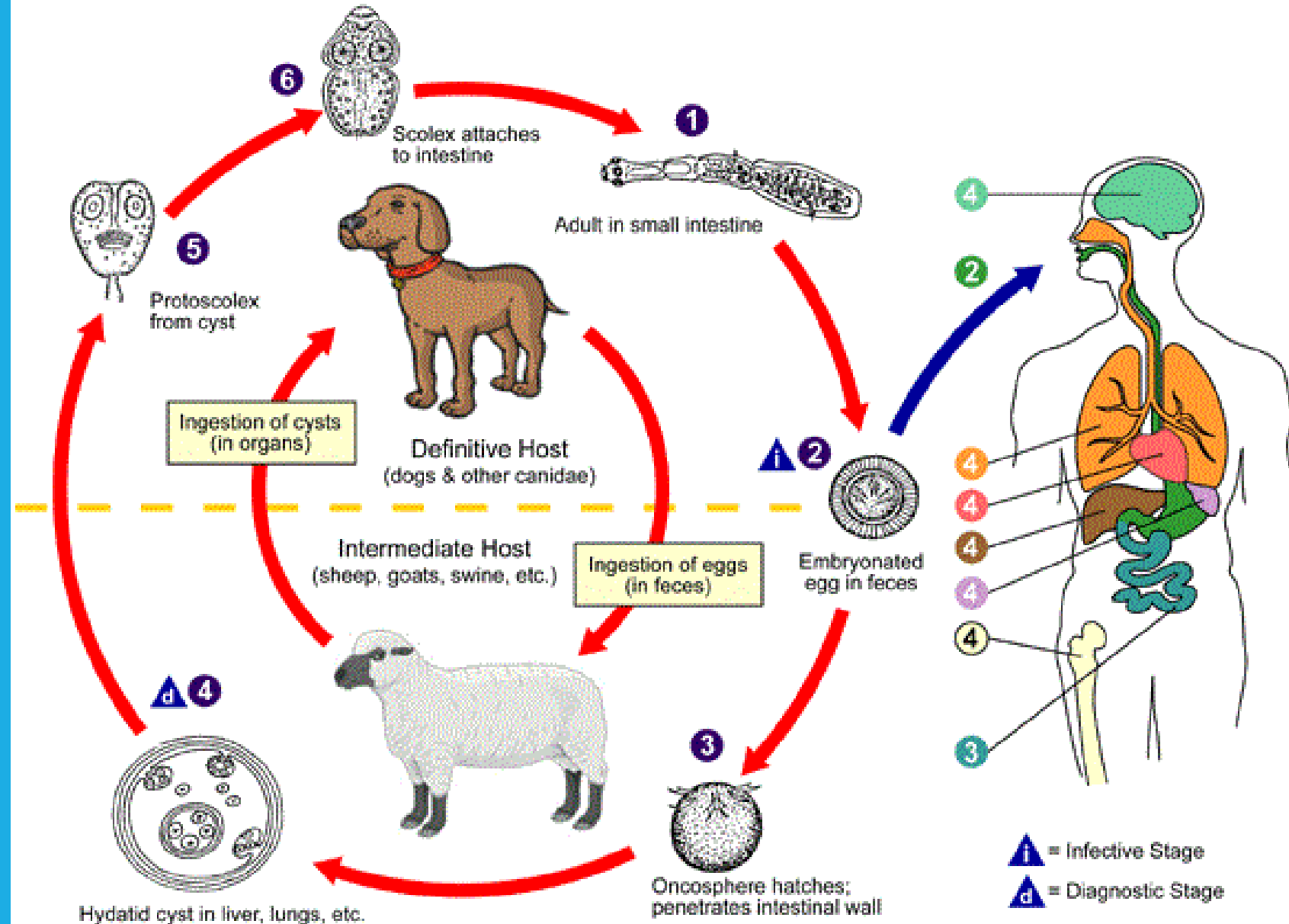
- Alveolar echinococcosis
- Rare in India

*Echinococcus ligartus*

- Rare

# How Hydatid Cyst develop

- ✓ Dog is the definitive host
- ✓ Sheep is the intermediate host
- ✓ Human is infected by the embryonated eggs through contaminated food.



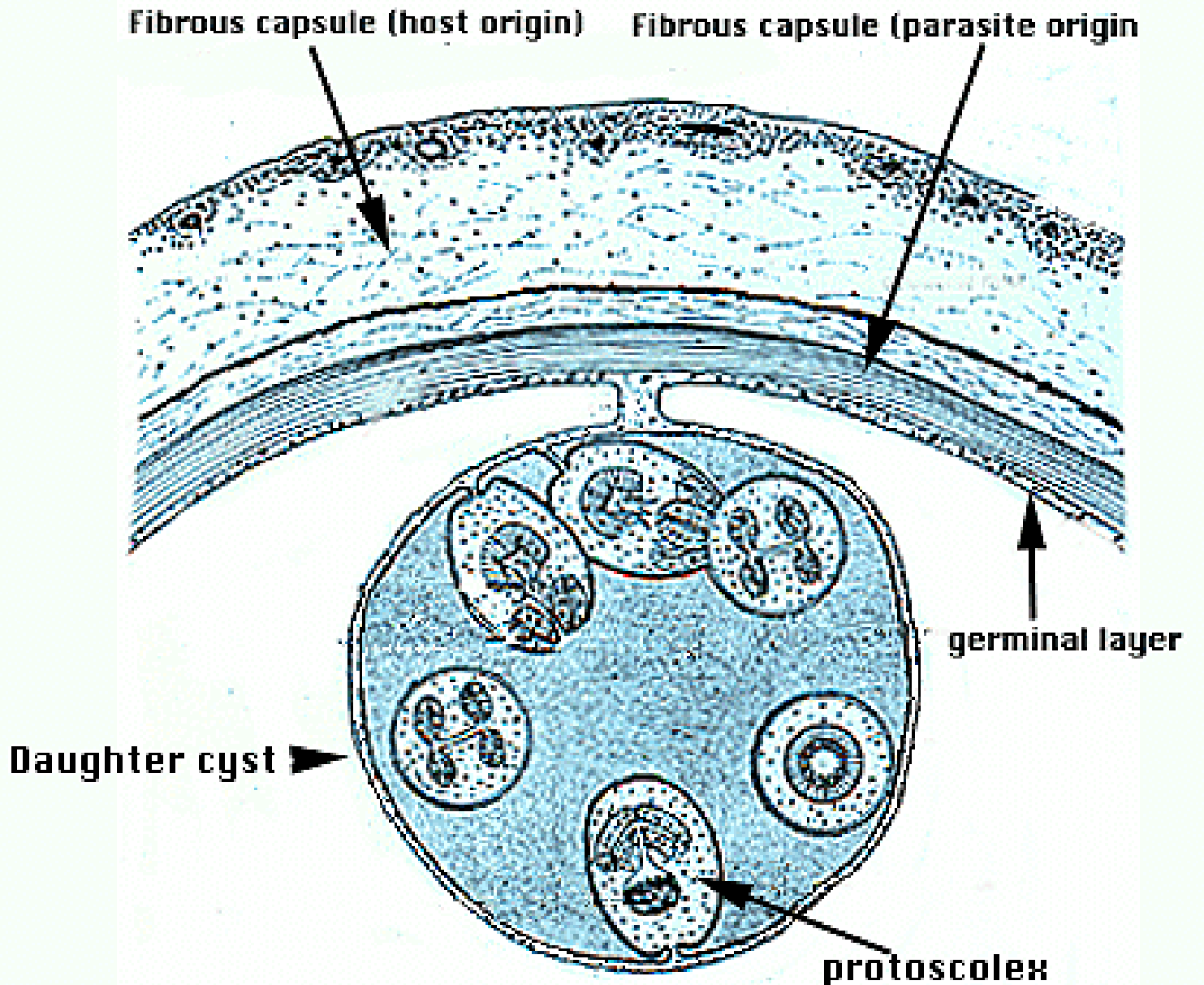
# Structure of Hydatid Cyst

## Three layers

1. Adventitia
2. Laminated membrane
3. Germinal epithelium

## Hydatid fluid

1. Clear
2. High sp. Gravity
3. Hooklets & scoleces



**Hydatid cyst**

# Complications

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## **Rupture**

- Internal
- External

Secondary infection

Anaphylactic shock

Liver replacement

# Diagnosis

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OF HYDATID CYST OF THE LIVER





# Clinical Presentation

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## SYMPTOMS

Usually asymptomatic (75%)

Most common symptoms are

- **Abdominal pain (RUQ/epigastrium)**
- Vomiting
- Dyspepsia

Non-specific symptoms

- Fever
- Fatigue
- Nausea

## SIGNS

**Hepatomegaly (Most common)**

RUQ tenderness

Jaundice

# Investigations

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## Investigations of choice

- **Ultrasonography**
- **CT**
- **MRI**

## In suspected biliary involvement

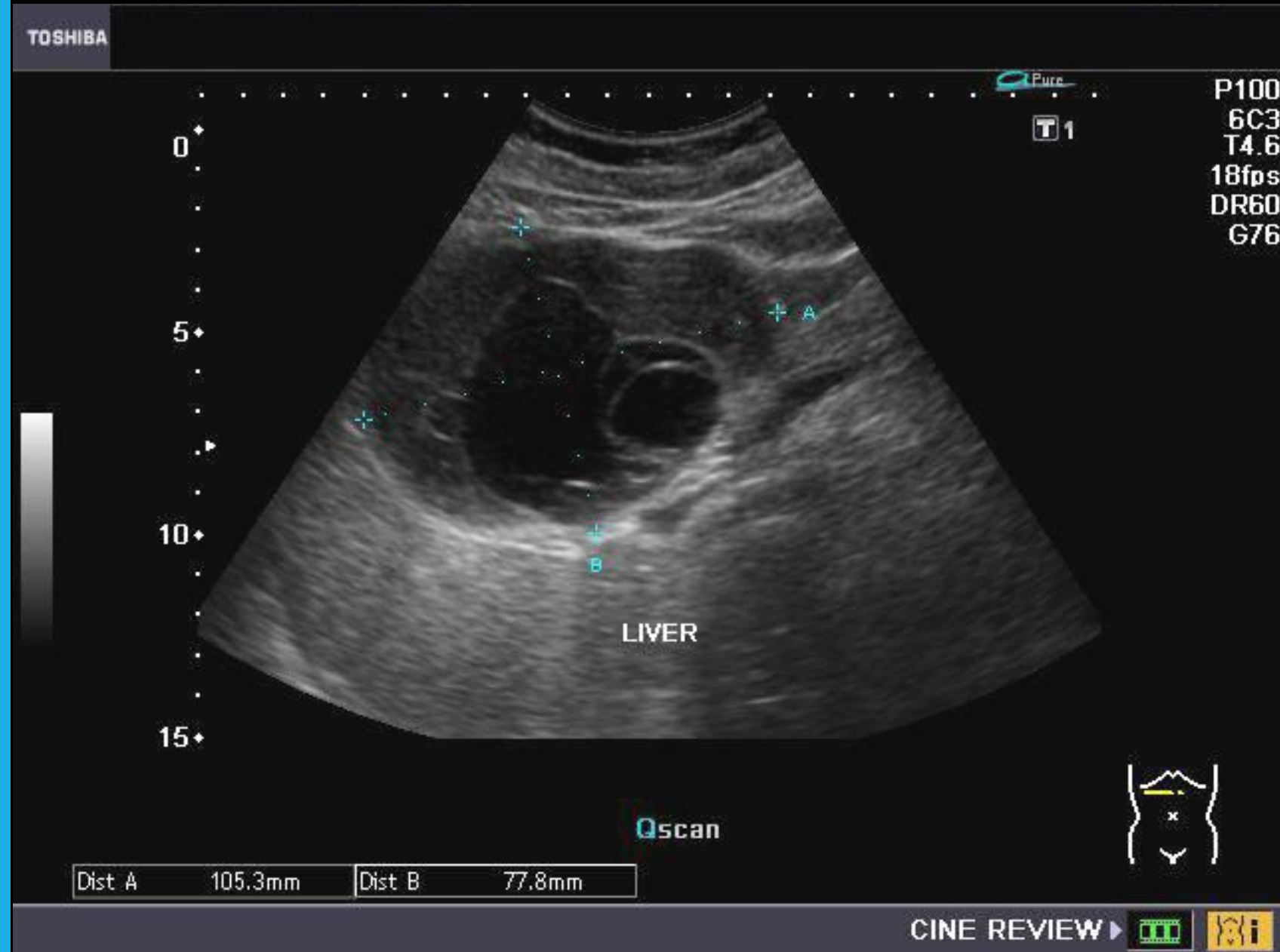
- ERCP
- PTC

## Other investigations

- Serology (ELISA)
- Lab investigations (Eosinophilia, ↑Bilirubin, ↑WBC)
- Chest radiograph (shows calcification)

# Ultrasonography

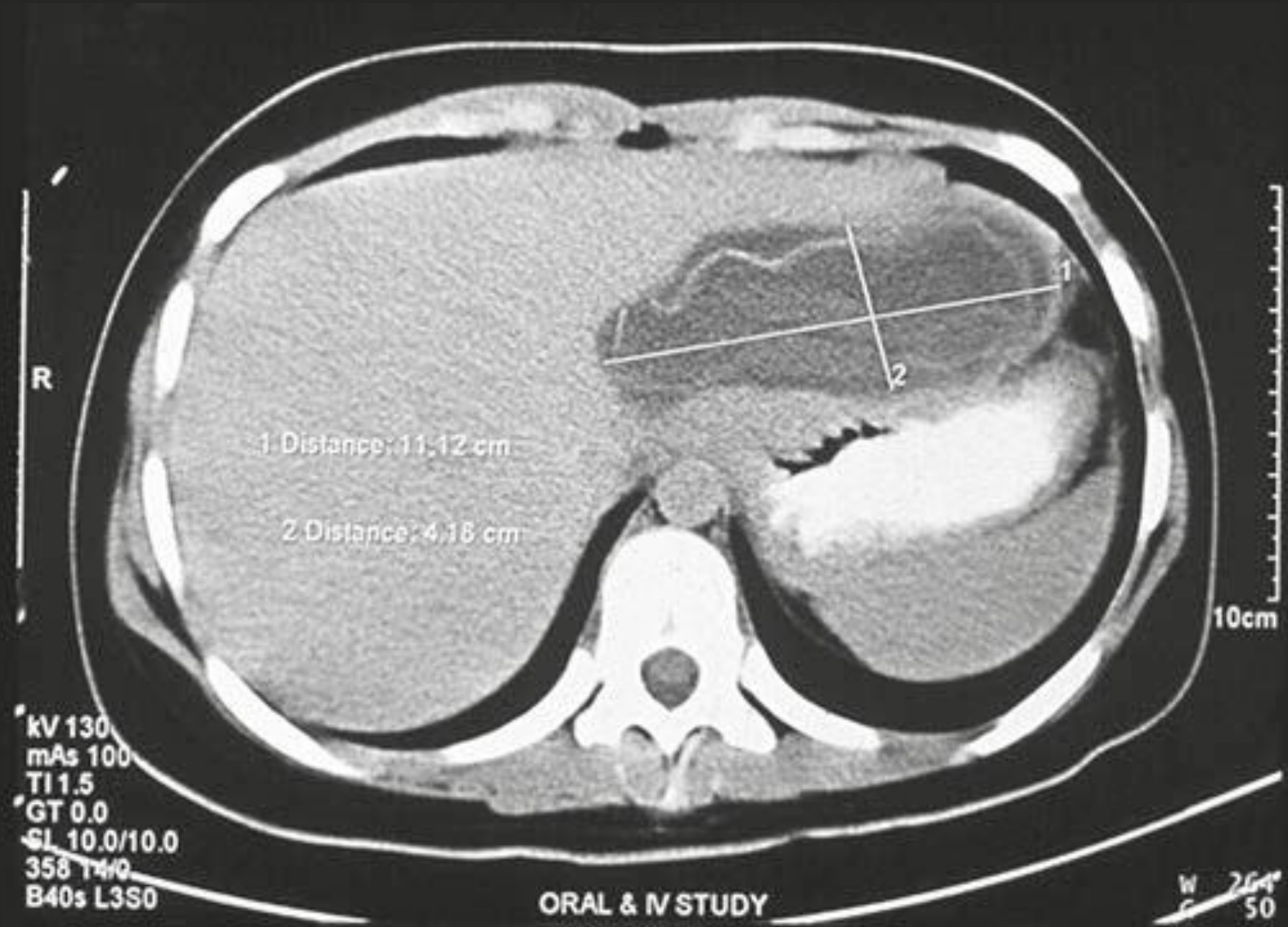
- ✓ Defines internal structure, number & location of cysts
- ✓ Shows presence of complications
- ✓ Specificity is around 90%
- ✓ Gharbi classification is based on USG findings



Hydatid Cyst on USG

# CT scan

- ✓ More specific information about location and depth
- ✓ Visualize daughter cyst and exogenous cyst
- ✓ Volume can be estimated



CT scan of Hydatid cyst of Liver showing separated lamellar membrane

# Treatment

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OF HYDATID CYST OF THE LIVER



# Principles of Treatment

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Eradication of the parasite within the cyst

Protection of host against spillage of scoleces

Management of complications

# Treatment Options

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## Medical

- Small cysts
- Multiple cysts in several organs

## PAIR

- Relapse after Surgery
- Failure of chemo TX
- Refuse SX

## Surgical

- It is the treatment of choice

# Medical Therapy

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## Albendazole

- Drug of choice
- 400 mg orally BD  $\times$  1-6 months
- Also reduce recurrence after surgery

## Mebendazole

- Used orally
- Poor bioavailability



# Puncture-Aspiration-Injection-Reaspiration

US guidance / Local anesthesia

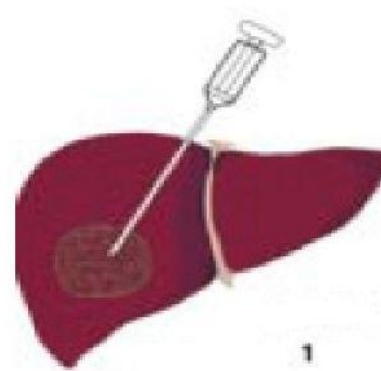
Punctured with 22 gauge needle

50% fluid aspirated

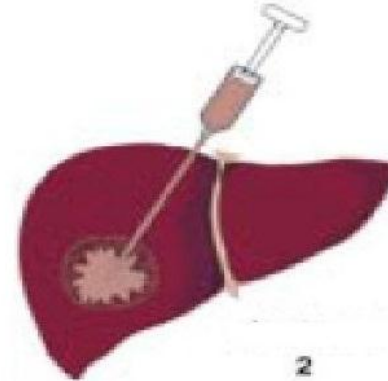
Radio-opaque dye injected

Scolicidal agent injected

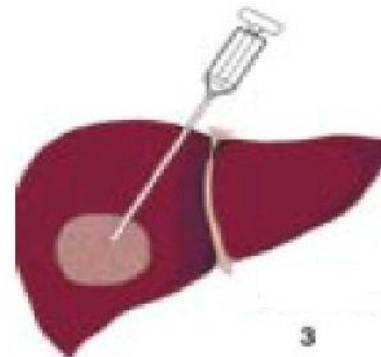
Reaspiration after 20 minutes



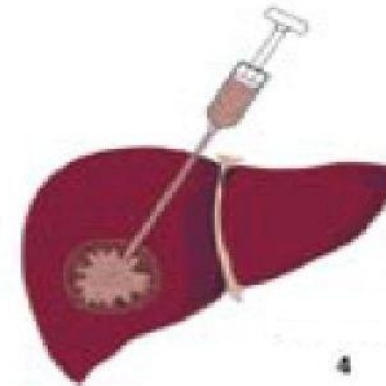
Puncture



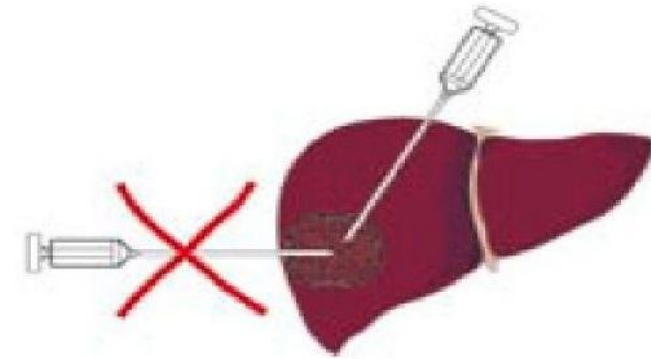
Aspiration



Injection



Reaspiration



# Surgical Treatment

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## Objectives

- Inactivate the scoleces
- Prevent spillage
- Eliminate viable elements
- Manage residual cavity

# Surgical Options

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## Open cyst evacuation

- Safest surgical approach
- Peripherally located cyst are most easily treated

## Laparoscopic cyst evacuation

- Safe for peripherally located cysts
- Suitable for anterior & thin walled cyst

## Pericystectomy

- Complete resection of cyst through a plane outside pericyst or along wall.

## Liver resection / transplantation

- Multiple cyst near major blood supply
- Cyst in a safe location

# Open Cyst Evacuation

Abdominal or flank approach



Hypertonic saline soaked gauze



Cyst opened



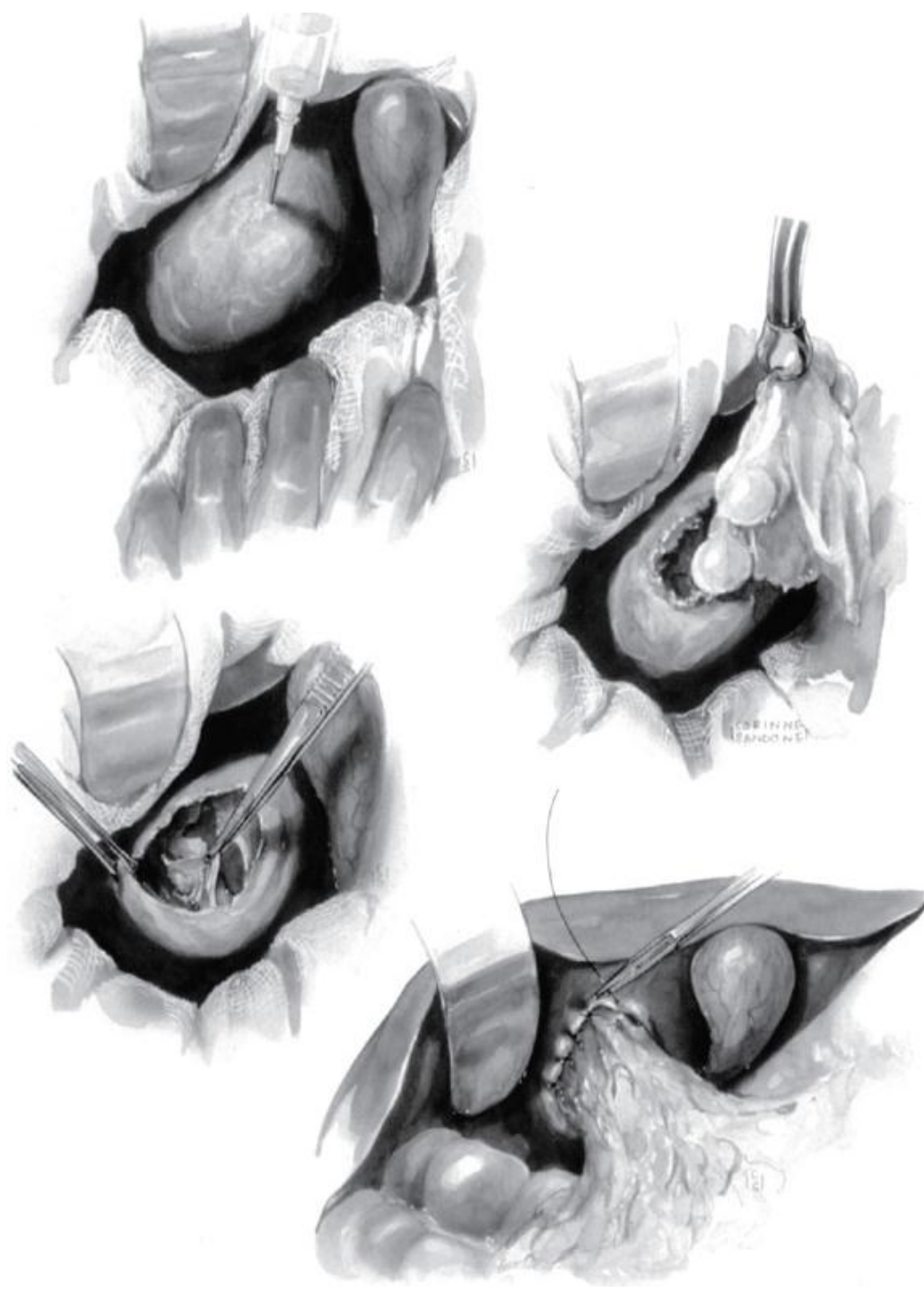
Suction in high -ve pressure



Cyst completely opened &  
debris cleared

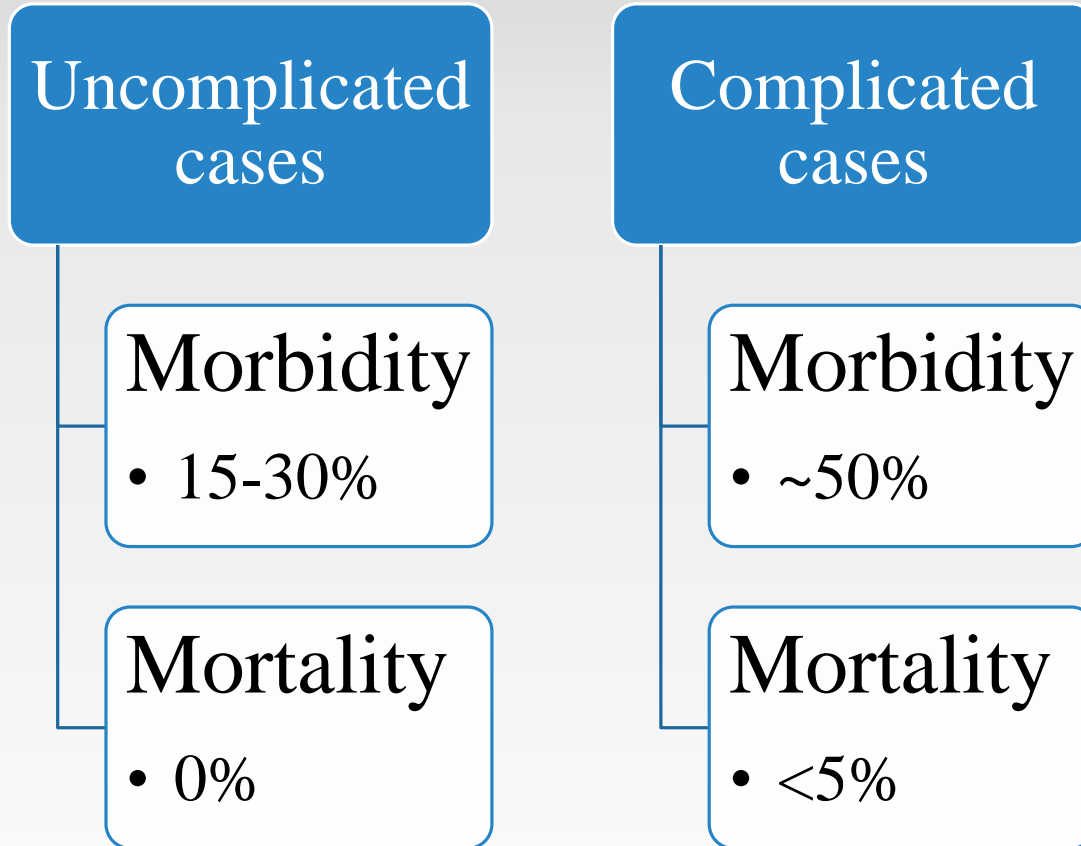


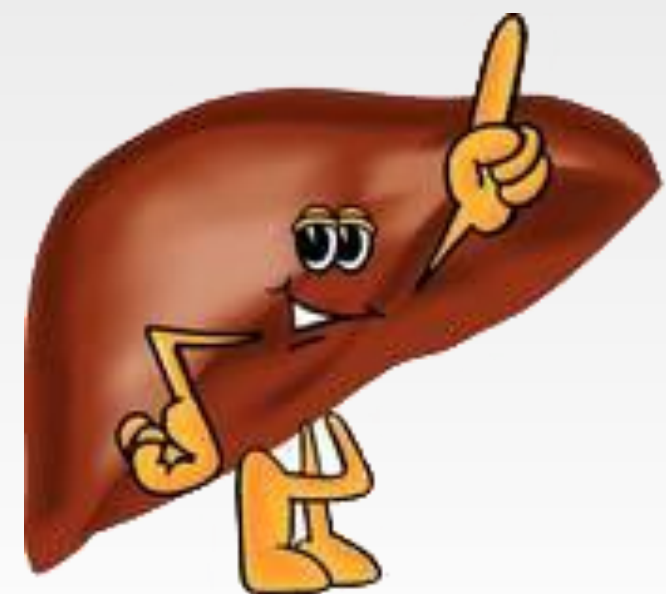
Irrigated with scolicedal agent



# Outcome

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thank  
you!