

Complications of Pulmonary Hydatid Cysts Disease

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Complications of Pulmonary Hydatid Cysts Disease

Introduction

- *Echinococcus is one of the common infections around the world*
- *Remains a serious health problem in developing countries. **Syria is one of them.***
- ***Small intact cyst is generally asymptomatic .***
- *The symptoms appear with pressure on the adjacent organs by **large cyst** and often during the **development of complications.***

Almouassat University *Hospital*, Damascus 800 beds .



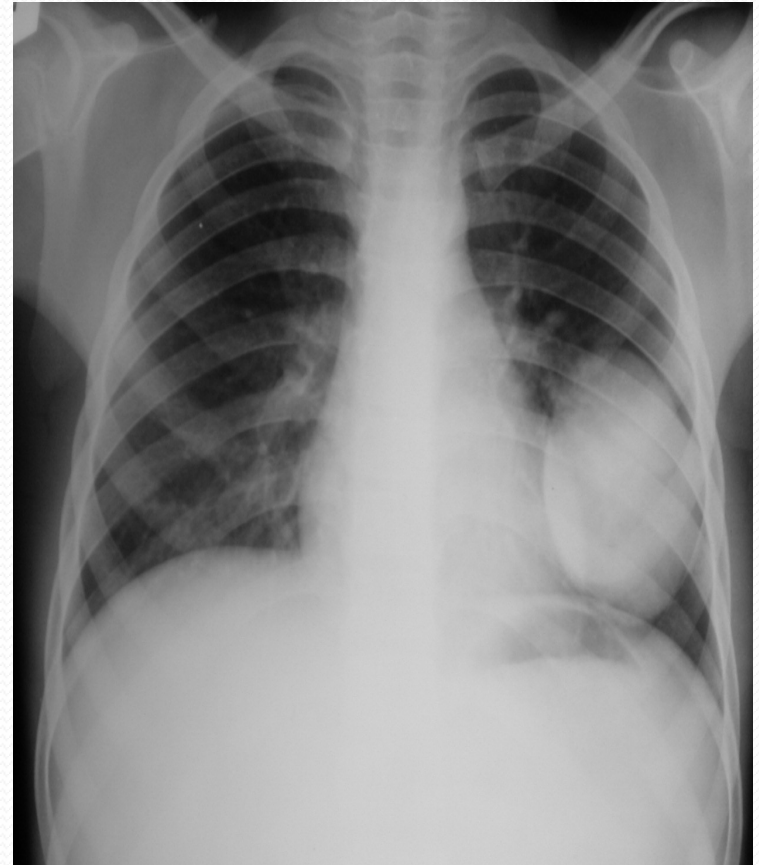
Complications of Pulmonary Hydatid Cysts Disease

- *1- Complications of intact cysts*
- *2- Complications related to hydatid cyst rupture specially into the bronchial tree.*
- *3- Pleural complications*
- *4- Thorax wall complications*
- *5- Respiratory system complications from the hydatid cysts in the liver*
- *6- Systemic complications*

Complications of Pulmonary Hydatid Cysts Disease

Intact Hydatid Cyst

- *homogenous, well defined, round or oval shadow*
- *Intact Cysts is Usually asymptomatic*



Complications of Pulmonary Hydatid Cysts Disease

1- Compression on the adjacent organs

- **A- Intact cysts is asymptomatic**

- **B-**



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***9. Çobanoğlu S, Sayın F, Mergül B (2017) Diagnostic Differential Analysis of 11 Cases of Hydatid Disease. *Turkiye Parazitol Derg* 35: 164-168.

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Complications of Pulmonary Hydatid Cysts Disease

1- Compression on the adjacent organs

- ***B- Large cysts** may lead to the symptoms due to pressure(10% of the large cyst):*
 - *Mediastinum.....Mediastinal shift*
 - *The esophagusDysphagia*
 - *heart..... Cardiac malposition and arrhythmia*
 - *tracheaDyspnea and stridor,*
 - *veinsVena Cava Superior Syndrome*
- rarely** may lead to atelectasis , pneumonia, destruction*

Our study

On our 297 patients during 15 years:

- 178 patients (60%) intact cysts***
- 119 Pts. (40%) complicated cysts (rupture to the airway or to the pleural cavity)***

in our study 2007,

Radiological Manifestations of the Pulmonary Hydatid Cysts (15 years)

Complications of Pulmonary Hydatid Cysts Disease

2- Complications Related to Hydatid Cyst Rupture to the bronchial system

- *Perforation rates in lung hydatid cysts may vary between 25-50% in different series**

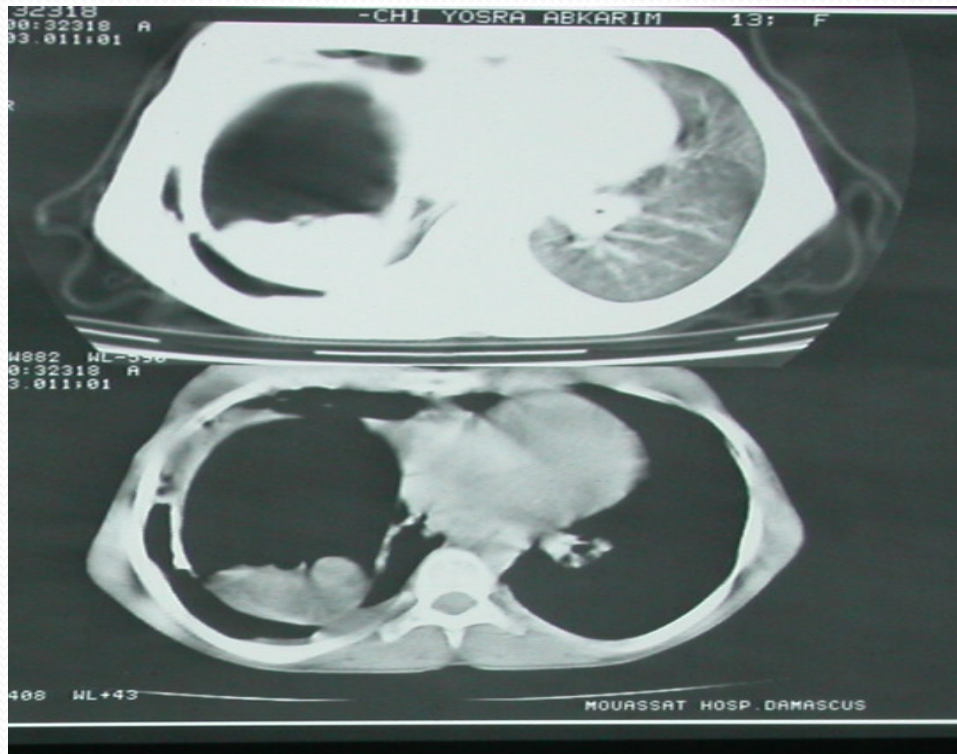
**Yekeler E, Karaoğlanoğlu N (2012) Akciğerin Parasitic Diseases of the Lung: Hydatid Cyst Complications. Türkiye Klinikleri J Thor Surg Special Topics 5: 157-164*

Complications of Pulmonary Hydatid Cysts Disease

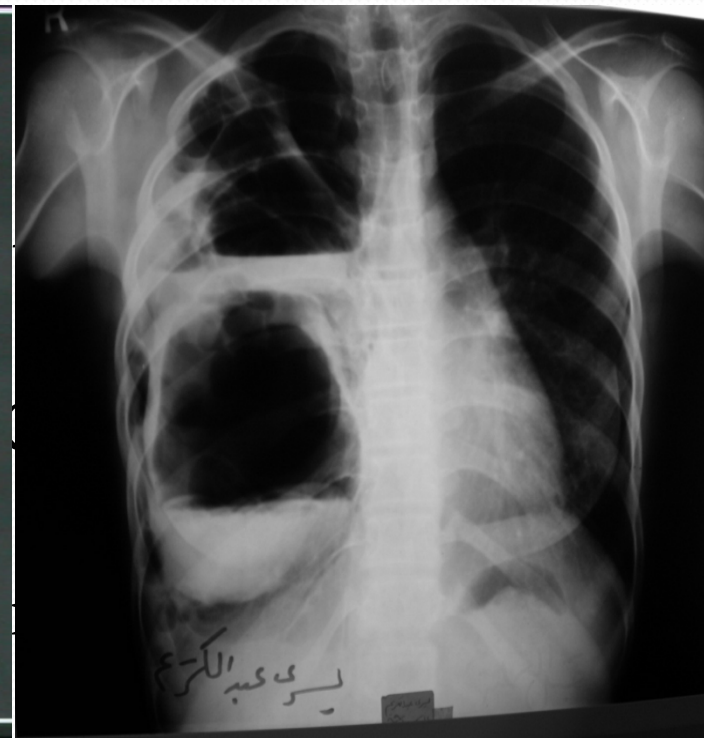
2- Complications Related to Hydatid Cyst Rupture to the bronchial system

- *Complications :*
 - *Asphyxia*
 - *Hemoptysis,*
 - *Pneumonia (reaction or infectious pneumonia), pulmonary abscesse*
 - *Anaphylactic reaction and shock*
 - *aspergilloma in the cyst cavity*
 - *Disseminated pulmonary hydatidosis*

2- Complications Related to Hydatid Cyst Rupture to the bronchial system

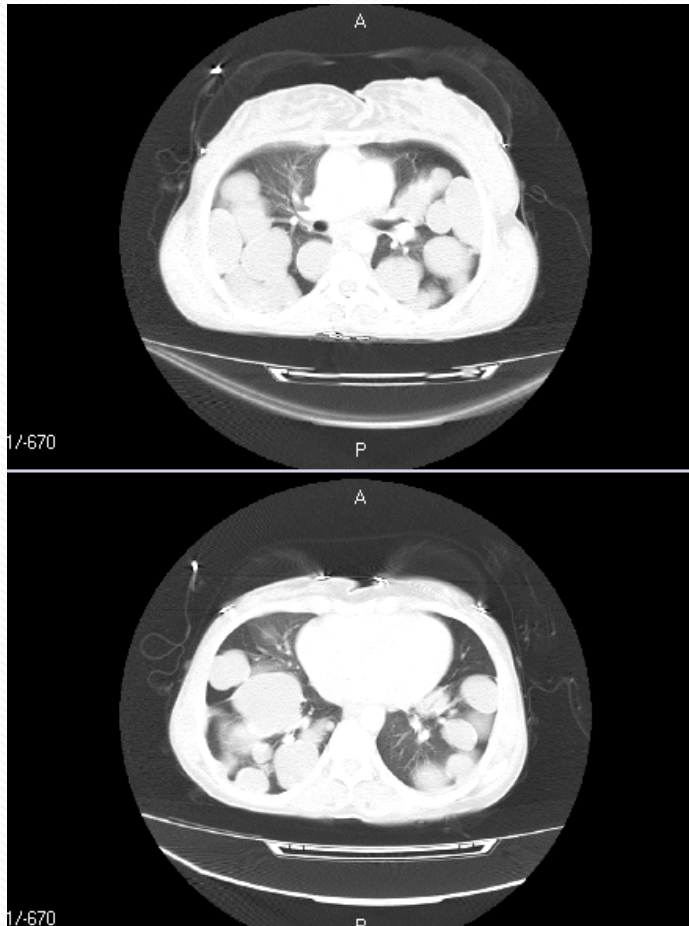


Water lily sign or comolette sign



Air liquid level

Late complication: Disseminated pulmonary hydatidosis



The benign cancer !

Complications of Pulmonary Hydatid Cysts Disease

3- Pleural complications (5-13%)

- *Rupture of the lung cyst into the pleural cavity**
 - *Pneumothorax, hydropneumothorax, tension pneumothorax,*
 - *Empyema, bronchopleural fistula,*
 - *Pleuritis and pleural thickening, trapped lung,*
 - *Secondary disseminated pleural hydatid disease*

Kılıç D, Fındıkcıoğlu A, Bilen A, Koç Z, Hatipoğlu A (2007)
Management of complicated hydatid cyst of the thorax. ANZ J Surg 77: 752-757.
,1515. Arıbas OK, Kanat F, Görmüş N, Türk E (2002)
Pleural complications of hydatid disease.
J Thorac Cardiovasc Surg 123: 492-497.

Complications of Pulmonary Hydatid Cysts Disease

3- Pleural complications

- *Hyrdopneumothorax*
Refractory to chest
drainage.
Need early surgical
treatment



Complications of Pulmonary Hydatid Cysts Disease

3- Pleural complications

- *9 y-old boy*
- *Chest drainage 4 years ago*
- *Now white hemithorax*
- *Disseminated pleural hydatidosis*



Complications of Pulmonary Hydatid Cysts Disease

4-Thorax wall complications(1-2%)

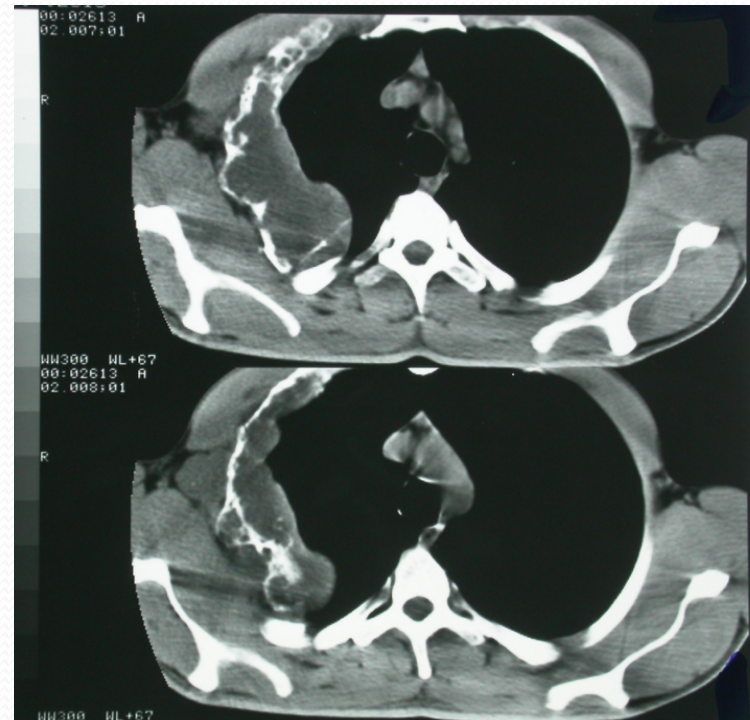
- *Bone destruction .
Radiologically imitate tumors .*
- *Vertebral destruction and severe neurologic disease .*

Complications of Pulmonary Hydatid Cysts Disease

4-Thorax wall complications(1-2%)

Thorax Wall Hydatid Cysts

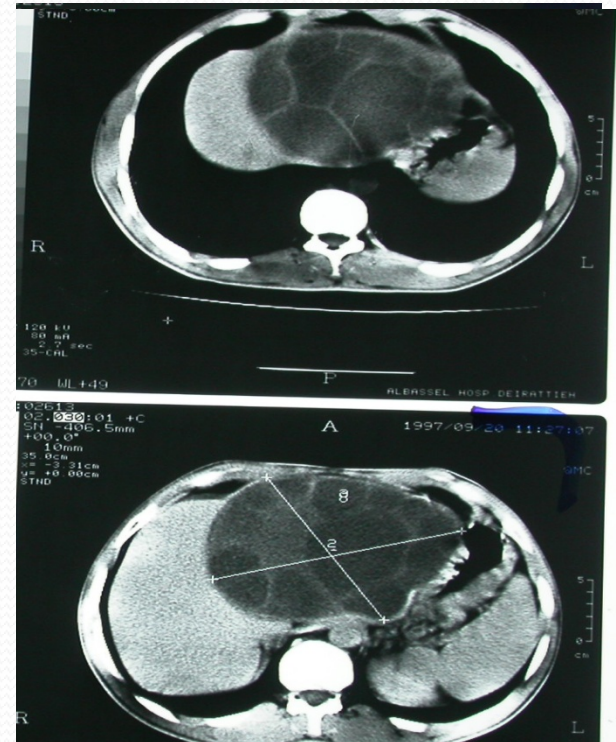
- Costal Hydatid Cysts



Complications of Pulmonary Hydatid Cysts Disease

4-Thorax wall complications(1-2%)

Hydatid cysts destroyed the rib
With large Hepatic Cyst



Complications of Pulmonary Hydatid Cysts Disease

5- Respiratory system complications of the hydatid cysts in the liver (rate of 0.6-16%)

- *Perforation to thorax: (dome of the liver)*
 - *Bilateral pleural effusion,*
 - *Empyema,*
 - *Parenchymal destruction(Bilobronchial fistula)*
- *High mortality (9-43%)*

Complications of Pulmonary Hydatid Cysts Disease

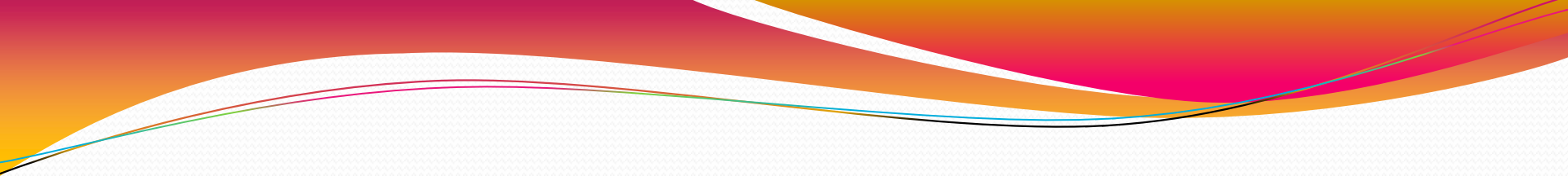
5- Respiratory complications of the hydatid cysts in the liver (rate of 0.6-16%)



Complications of Pulmonary Hydatid Cysts Disease

6- Systemic complications (8%)

- *Simple allergic reaction ,such as chest pain, itching, urticarial , flushing.*
- *Recurrent urticarial or bronchospasm (Cyst leaks)*
- *Anaphylaxis and shock and very rarely death.*



Opus study

Clinical and Radiological Manifestations of 206 Patients with Pulmonary Hydatidosis over 10 year Period

- *Darwish, B., Clinical and Radiological Manifestations of 206 Patients with Pulmonary Hydatidosis over 10 year Period, Primary Care Respiratory Journal (2006) 15 ,246-251.*

Clinical presentations of pulmonary *hydatidosis in our 206 Patients/10* *years*

Symptoms	Our study in Syria
Asymptomt.	18%
Cough	54%
Chest pain	36%
Dyspnea	25%
Hemoptysis	19%
Hydroemesis	10%
Infection	10%
Pleuritis	5%
Pneumothorax	3%
Total pts.	206 Pts.

Conclusion of Complications of Pulmonary Hydatid Cysts Disease

- *The symptoms of the pulmonary hydatid cyst may appear with pressure on the adjacent organs by large cyst But commonly during the development of complications.*
- *Complicated Pulmonary Hydatid cysts present with many different clinical and radiological findings.*
- *But most cases diagnosed radiologically.*
- *Some cases develop difficult medical condition.*

Enucleation of the pulmonary cyst

- The operation !



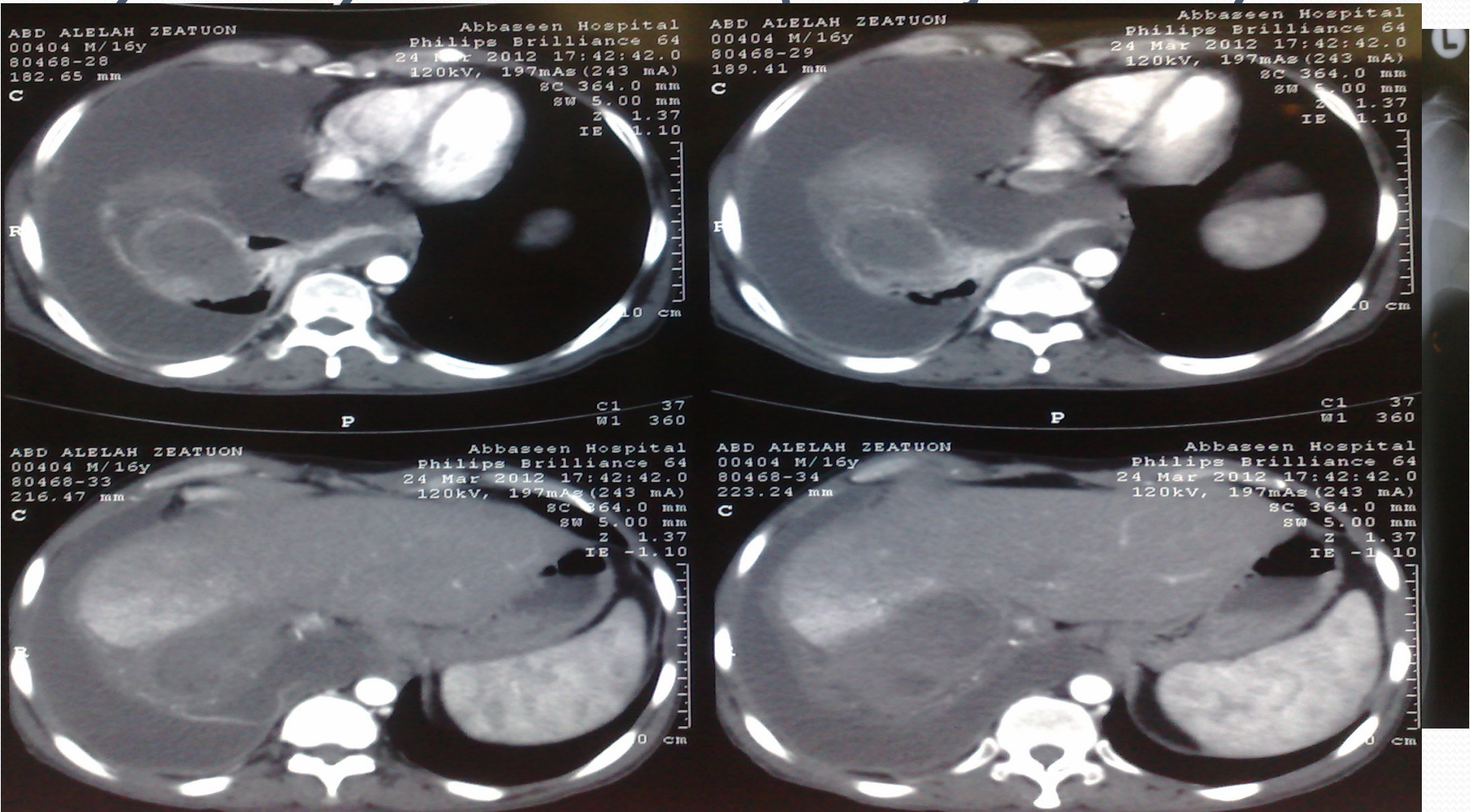
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Complications of Pulmonary Hydatid Cysts Disease

5- Respiratory system complications of the hydatid cysts in the liver (rate of 0.6-16%)



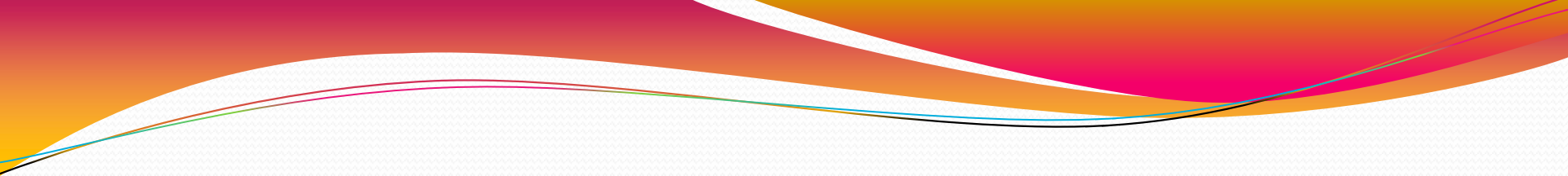
Radiological Manifestations of the PHC

- *Upon :*
- *A- Forms of the cysts:*
 - 1- Intact.*
 - 2- Complicated typical.*
 - 3- Complicated atypical.*
 - 4- Pleural complications*
- *B- Localization of the cysts.*

in our study 2007,
Radiological Manifestations of the
Pulmonary Hydatid Cysts (15 years)

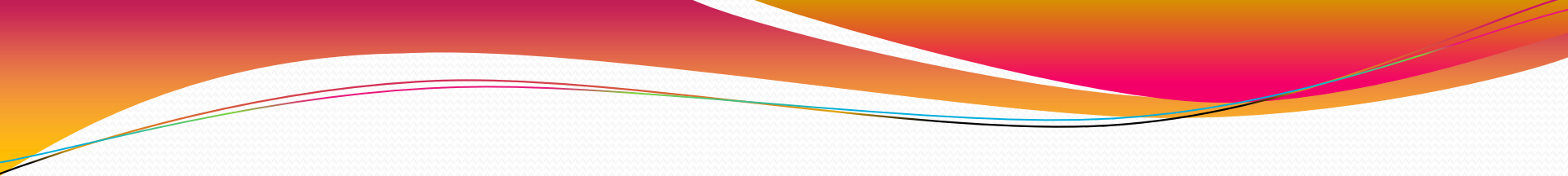
*in the Thoracic Surgery Department
at Almouassat University Hospital, Damascus.*

1992 – 2006
297 patients= 20Patients/y

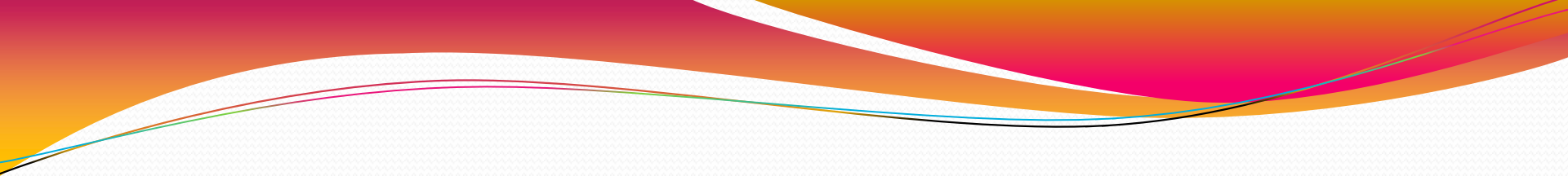
- 
- *In 83 patients on 297 patients (28%) revealed Complicated pulmonary hydatid cysts*

in our study 2007,

Radiological Manifestations of the Pulmonary Hydatid Cysts (15 years)

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- *In 21 patients on 297 pt. (7%) manifest radiologically with atypical shadows like :*
 - *Lung cancer*
 - *Pneumonia.*
 - *Abscess.*
 - *Lung metastases.*

*In our study on 297 Patient s :
Complicated Typical Pulmonary Hydatid Cyst*



In our study on 297 Patients :

Pleural complications on 15 Patients (5%)