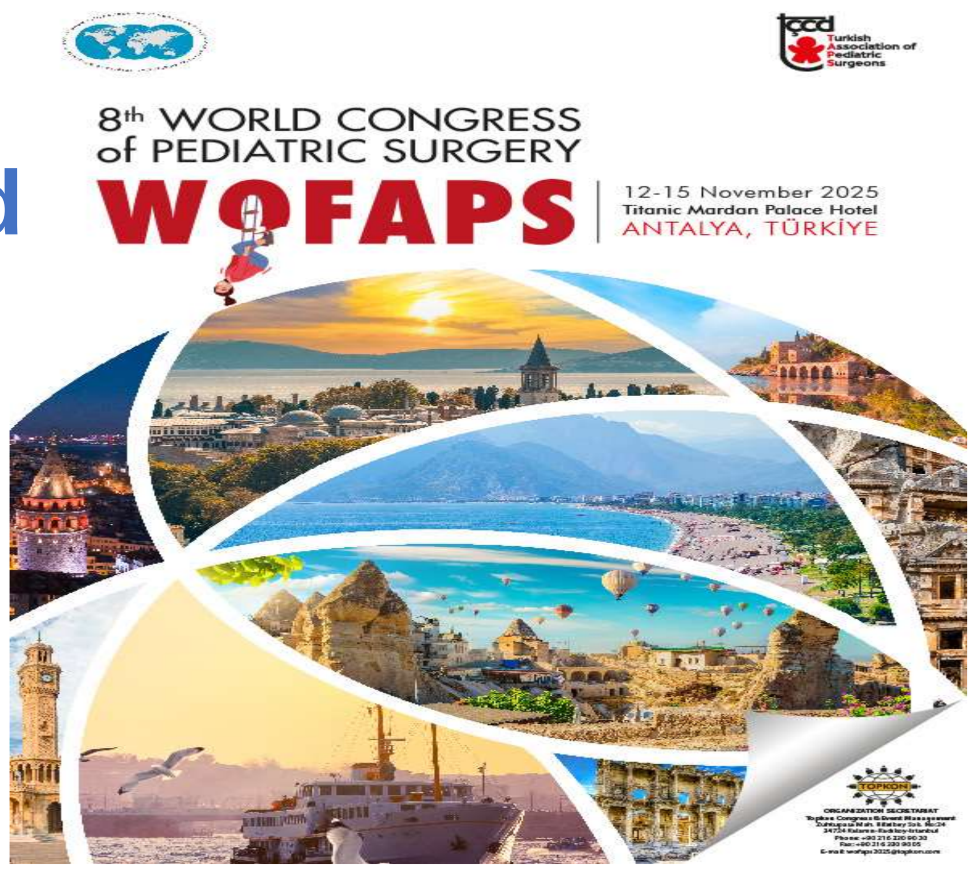
# Giant Congenital Thoracic Cyst in an 18-Month-Old Infant : A Diagnostic and Surgical Challenge

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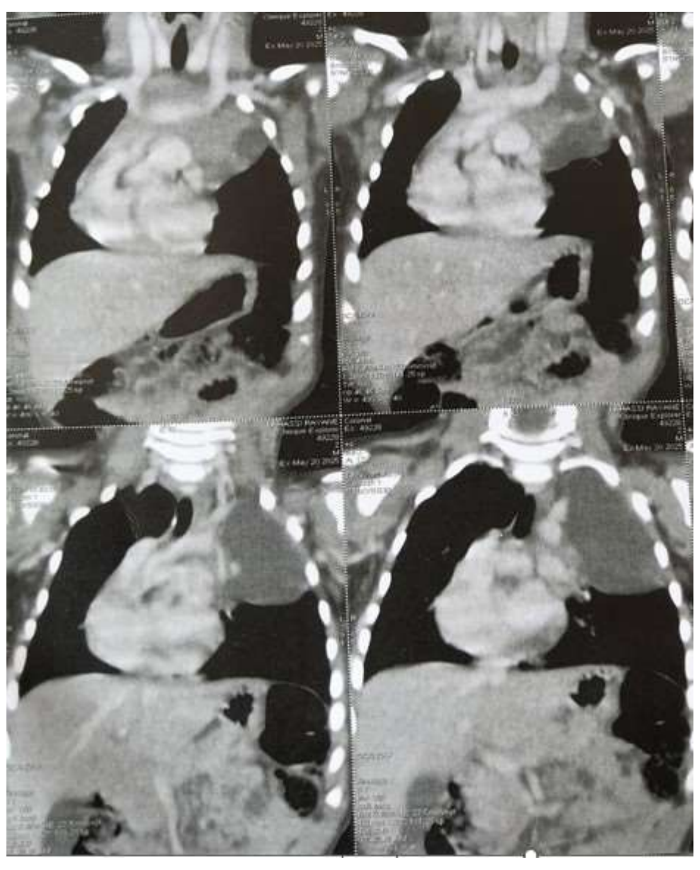
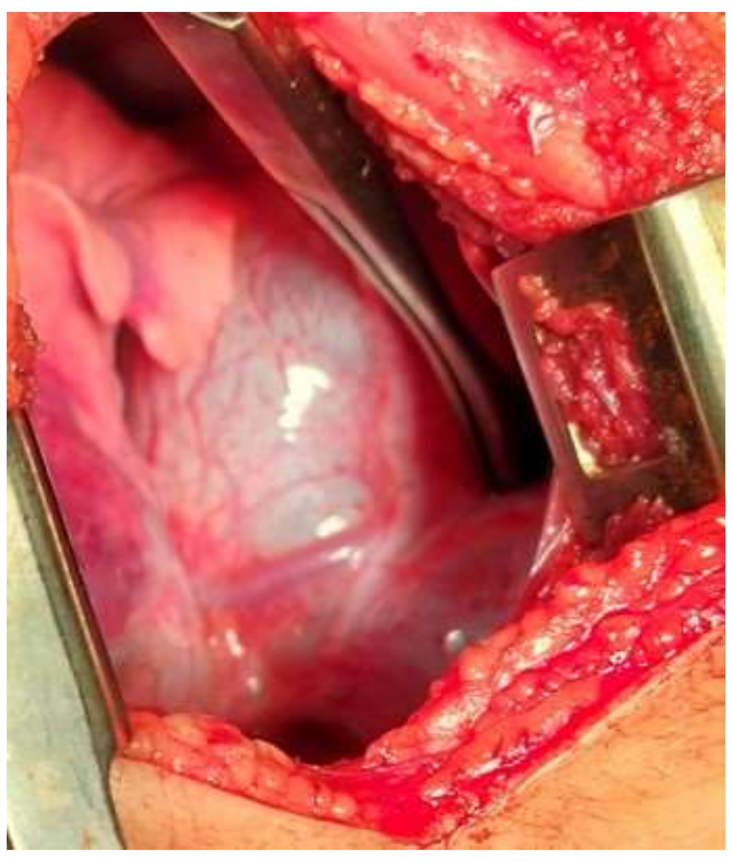
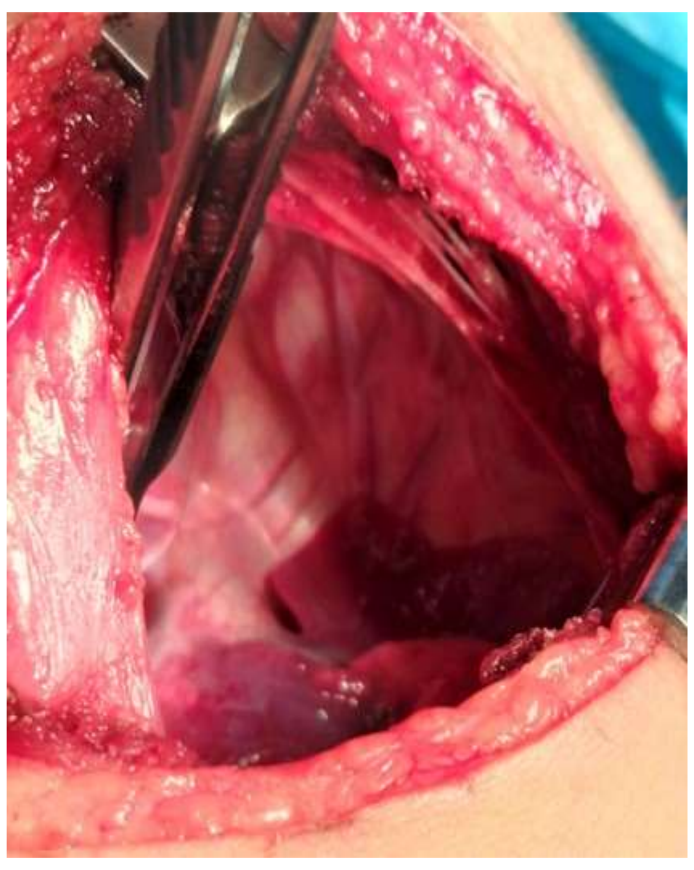
## Background:
Bronchogenic cysts are rare congenital malformations of the foregut that typically present in the mediastinum or lung parenchyma. Antenatal detection is increasing due to routine fetal ultrasound and MRI. However, some cases may pose complex diagnostic and surgical challenges, especially when the lesion is large and its topography is uncertain.

## Case Presentation:
We report the case of an 18-month-old male infant who was diagnosed antenatally with a left sided thoracic cystic mass. Postnatal imaging follow-up showed progressive increase in the volume of the lesion, reaching a diameter of 8/10 cm , with significant mass effect. Preoperative assessment, including chest CT was inconclusive regarding the exact topography suggesting either a superior mediastinal origin or a left upper lobar pulmonary origin and the patient underwent a surgical exploration via a thoracotomy.

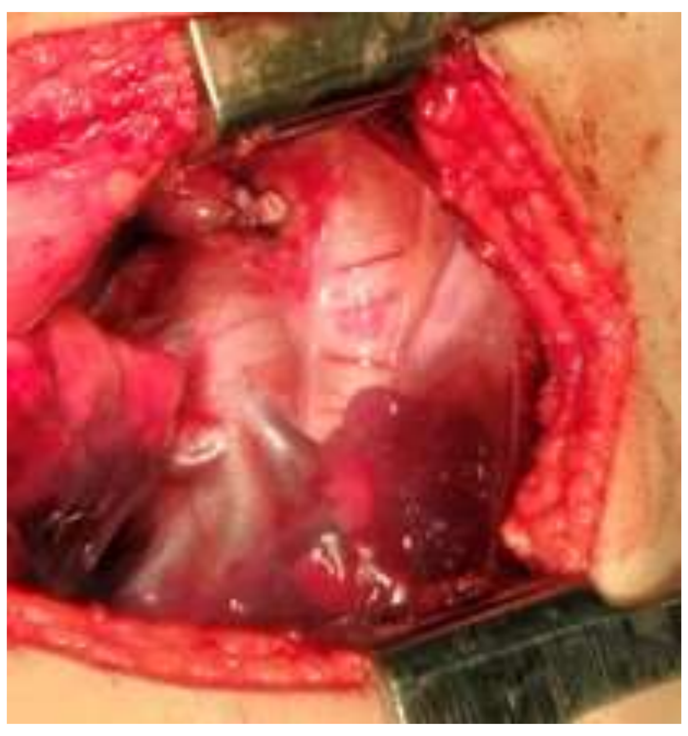
## Results:
Intraoperative exploration found a large upper thoracic encapsulated cystic mass including a non fonctioning pulmonary fragment .
The mass was supplied by a segmental bronchus of culmen ,vascularized by a systemic vessel coming from descendant thoracic aorta and venous retun in pulmonary system.
The culmen was completlely separated from lingula by a total surnumerary fissure.
We made a segmentectomy after ligation of all elements of pedicle and put a thoracic drain.
The drain was removed after 48 hours with a good chest x-ray and the patient was discharged at 5th post opérative day with uneventful follow up of 10 months.
The mass Histopathological examination confirmed the diagnosis of a **bronchogenic cyst associated with intra lobar pulmonary sequestration.**





## Discussion:
° The Bronchogenic cyst(BC) is a rare congenital malformation due to developmental error results in a fluid or mucus-filled, blind-ending pouch fails to separate completely or develop correctly and lined with respiratory-type epithelium.
°The more commun location is mediastinum followed by lung parenchyma in lower lobes contrary to our case.
° Intra lobar pulmonary sequestration(ILPS) is less frequent than the extra pulmonary sequestration and more frequently associated with adenomatoide pulmonary malformation unlike our patient who presented an exceptionel association(BC+ILPS).
°Chest CT scann contributes to the diagnosis of ILPS by showing the systemic aberrant vessel ,we did not see it for our child because of the volume of the mass and we didn't practice an angioscann.
°For our patient,at first intraoperative sight, the mass was thought mediastinal pushing down the two left lobes but after careful dissection and checking the vascularization and existence of upper segmental bronchus supplying the cystic mass we conclude to the existence of a complete surnumerary fissure between culmen and lingula which is rare less then 10% for incomplete fissure and exceptionel for the complete one.
°A complete excision of the mass was achieved by segmentectomy interesting the culmen without recurrence.



## Conclusion:
This case highlights the diagnostic difficulties associated with giant congenital thoracic cysts, particularly in distinguishing mediastinal from intrapulmonary lesions when large. Antenatal detection, careful imaging follow-up, and multidisciplinary planning are key. Surgical excision remains the definitive treatment, both diagnostic and therapeutic.