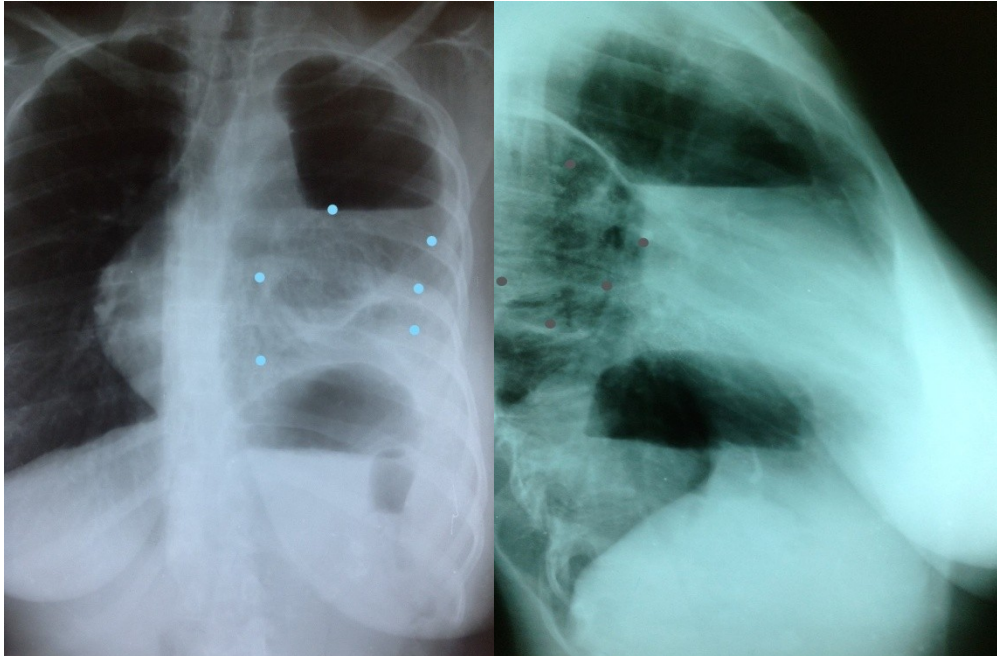
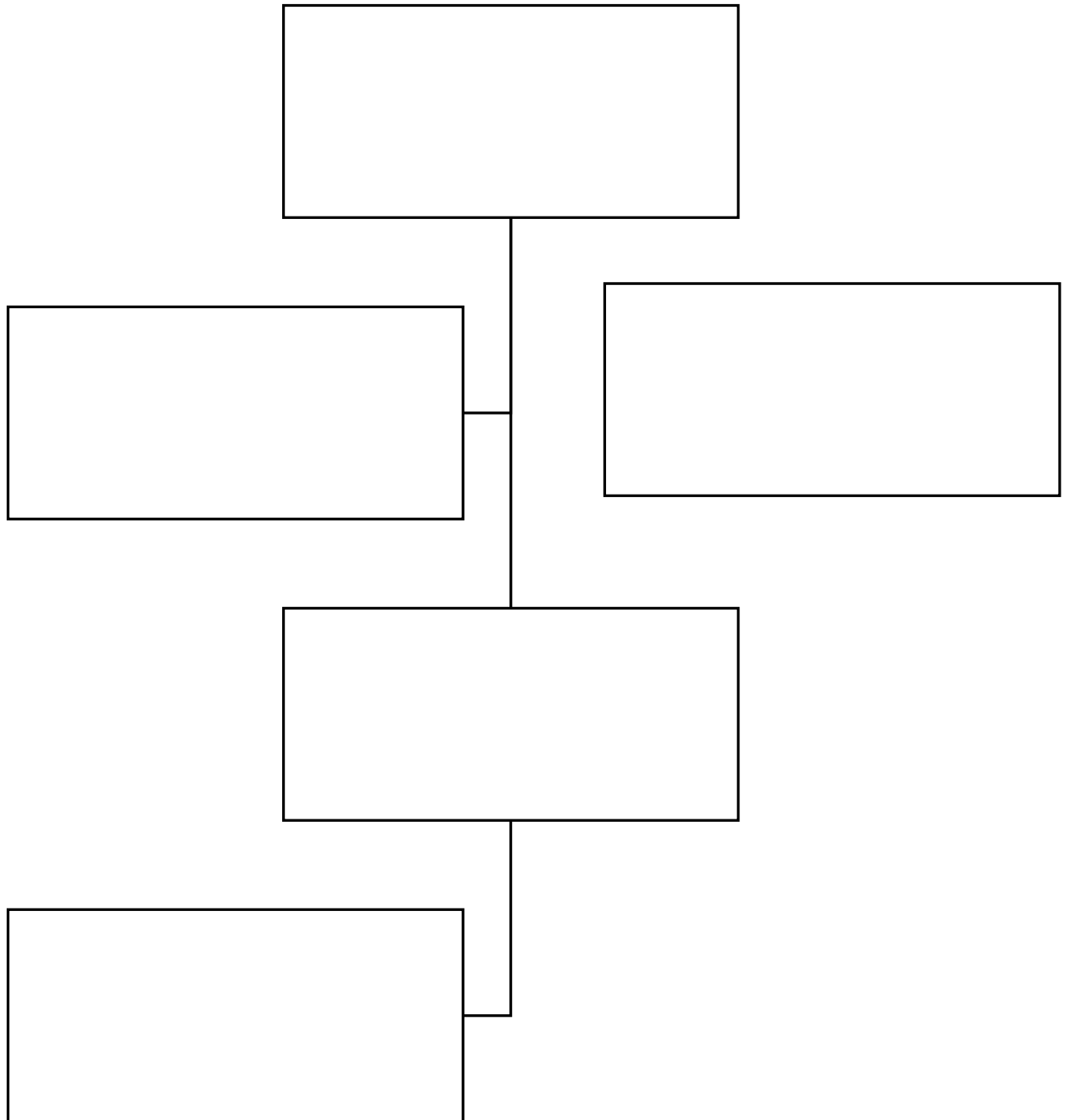


## Mediastinal Cystic Teratoma Misdiagnosed As Pleural Tuberculosis: a Case Report and Review of 63 Cases Revealed By Pleural Effusion.

*Figure and Table*



**Fig 1. Chest X-Ray** (left: face, right: profile): a 15-year-old girl presenting with a large teratoma expressed by pleural effusion in South Kivu, Democratic Republic of Congo



**Fig 2. Flow Chart Diagram** of literature search of cases presenting a mature teratoma with pleural effusion through Medline between May 2017 and November 2017

**Table 1. Demographic, Clinico-Pathology and Survival Findings of Reported Cases with Mediastinal Cystic Teratoma With Pleural Effusion**

Title	Age	Sex	Country	Clinics	Pathology	Time to Diagnosis	Type Of Surgery	Hospitalisation	Recovery Time	Evolution
<b>Children under one year old</b>										
<b>Agarwal A et al, 2017(Agarwal et al. 2018)</b>	28 weeks GA	NS	NS	Large pericardial effusion	Encapsulated immature teratoma	4 weeks	Pericardicentesis and surgery resection (EXIT procedure)	NS	NS	NS
<b>Dorterler ME et al, 2016(Dorterler, Boleken, and Koçarslan 2016)</b>	7 months	F	NS	Persistent pulmonary infection and SOB exacerbated at rest	Benign mature teratoma	20 days	Right posterolateral between 4 and 5 interthoracic thoracotomy	NS	NS	Good after 3 months FU
<b>Gobbi D et al, 2007(Gobbi et al. 2007)</b>	31 weeks GA	F	Italy	Sudden symptomatology: cardiorespiratory distress, diffuse oedema, abdominal distension, and no heart murmur	Encapsulated, multilobulated, cystic soft immature teratoma	26 days	Median sternotomy with resection of the masse	3 weeks	5 months	Good after 12 months FU
<b>Herberg U et al, 2006(Herberg et al. 2006)</b>	25 weeks GA		Germany	Large pericardial effusion, arterial hypotension,	Neonatal intrapericardial teratoma	9 weeks	Sternotomy with cardiac surgery	NS	NS	Good on FU

				respiratory distress						
<b>Grebille AG et al, 2003(Grebille et al. 2003)</b>	30 weeks GA	F	France	Fetal hydrops	Pericardial teratoma	3 weeks	Thoracoamniotic shunting	6 months	15 days	Good after 6 months FU
<b>Children and Adolescents between 1 and 17 years old</b>										
<b>Montebello A et al, 2017(Montebello et al. 2017)</b>	17 years	M	NS	SOB and pleuritic pain	Benign cystic teratoma	2 months	Thoracotomy and resection of the masse on the left after re-accumulation of the fluid previously drained	NS	NS	Good with no recurrence
<b>Tanupriya A et al, 2016(Agrawal et al. 2016)</b>	12 years	M	NS	Intermittent shoulder and chest pain	Mature mediastinal cystic teratoma with subtotal unidirectional pancreatic differentiation	NS	Extensive resection	NS	NS	Good
<b>Kuroda H et al, 2014(Kuroda et al. 2014)</b>	16 years	F		Severe right chest pain and dyspnea	Mature cystic teratoma	2 years	Thoracoscopy resection	4 days		Good after 6 months FU

<b>Miyazawa M et al, 2012(Miyazawa et al. 2012)</b>	15 years	M	Japan	Sudden onset of left-sided severe chest pain and dyspnea	Cystic mature teratoma	5 months	Thoracotomy with combined partial resection of the left brachiocephalic vein and mediastinal pleura	NS	NS	Good on FU
<b>Sarkar A et al, 2010(Sarkar et al. 2010)</b>	14 years	M	India	Heaviness of the left side of the chest side and SOB	Immature Teratoma	3 months	Left thoracotomy was performed and a large anterior mediastinal tumor removed	NS	NS	Loss to FU
<b>Kimura C et al, 2003(Kimura et al. 2003)</b>	17 years	F	Japan	Anterior chest pain	Mediastinal mature teratoma perforating into the lung	NS	Total resection of the tumor with adherent parts of the left lung	NS	NS	Good on FU
<b>Matsubara K et al, 2001(Matsubara et al. n.d.)</b>	12 years	F	Japan	Severe chest pain and respiratory distress	Benign mediastinal cystic teratoma into the right pleural cavity	NS	Thoracotomy	NS	NS	Good on FU
<b>Matsubara K et al, 2001(Matsubara et al. n.d.)</b>	14 years	F	Japan	Severe chest pain and respiratory distress	Benign mediastinal cystic teratoma into the right pleural cavity	NS	Thoracotomy	NS	NS	Good on FU
<b>Krishnan S et</b>	17	F	USA	Chest pain	Benign cystic	NS	Surgery	NS	NS	NS

al, 1983(Krishnan et al. n.d.)	years				teratoma with many Charcot- Leyden crystals					
<b>Adults above 17 years old</b>										
<b>Mohd Esa NY et al, 2016(Mohd Esa et al. 2016)</b>	41 years	M	NS	Cough, weight loss, appetite, intermittent fever, intermittent pleural effusions	Benign cystic teratoma	1 year	Thoracotomy and resection	NS	Long	Unusual bacterial infection of the thoracotomy wound
<b>Acharya MN et a, 2016(Acharya et al. 2016)</b>	24 years	F	NS	Cough productive of green sputum, dyspnea, fever	Differentiated teratoma without malignant transformation (2.0 × 7.8 × 4.5- cm)	2 months	Posterolateral right thoracotomy extended through the same intercostal space	30 days	28 days	Good after 3 months FU
<b>Gautam M et al, 2016(Mandal et al. 2016)</b>	28 years	F	India	Progressive SOB, heaviness of chest and low grade fever for last 1 month	Mature cystic mediastinal teratoma with left sided pleural effusion	1 months	Left anterolateral thoracotomy with debulking of mediastinal mass	37 days	30 days	Good on regular FU
<b>Liu CH et al, 2014(Liu et al. 2014)</b>	23 years	M	NS	History of fever, dyspnea, and right-sided chest pain	Mature cystic mediastinal teratoma complicated by superior vena cava syndrome, acute mediastinitis, and	6 days	Urgent median sternotomy with resection	NS	NS	Good on FU

					pleural effusion					
<b>Chow MB et al, 2014(Chow and Lim 2014)</b>	24 years	F	China	Increasing SOB	Mature teratoma	4 months	Resection by thoracotomy	NS	NS	Good on FU
<b>Kim JY et al, 2012(Kim et al. 2012)</b>	44 years	M	NS	No symptoms	Adenocarcinoma with sarcomatous transformation developed in mature cystic teratoma of the mediastinum	NS	Video-assisted thoracoscopic surgery	NS	NS	Relapsed 10 months (left pleural effusion with multiple pleural seeding nodules on chest CT scan)
<b>Inoue Y et al, 2011(Inoue et al. 2011)</b>	29 years	M	NS	Gradually worsening vague pain in the left chest	Mediastinal mature	7 days	Median sternotomy necessitating partial resection of the left upper lobe with a stapler	9 days	NS	Good after 2 years FU
<b>Machuca JS et al, 2010(Machuca et al. 2010)</b>	51 years	F	USA	Intermittent cough and precordial chest pain associated with SOB	Mature cystic teratoma	2 months	Left thoracotomy	NS	NS	Good after FU
<b>Suzuki H et al, 2010(Suzuki et al. 2010)</b>	24 years	F	Japan	Chest pain and fever	Mature teratoma that included pancreatic tissue complicated with acute mediastinitis	11 days	Median sternotomy	6 days	3 months	Good except left Recurrent nerve paralysis
<b>Yang CJ et al, 2007(Yang et</b>	45 years	F	Taiwan	No symptoms	Ruptured cystic teratoma	2 years	Video-assisted thoracoscopic	8 days		Good after 10 months FU

al. 2007)							surgery			
De Castro MA Jr et al, 2007(de Castro et al. n.d.)	27 years	F	Brazil	Chest pain and progressive dyspnea	Benign mediastinal teratoma	NS	Exploratory thoracotomy	NS	NS	Good after FU
Yuri T et al, 2006(Yuri et al. 2006)	19 years	M	Japan	Fever and dyspnea	Mixed choriocarcinoma and mature teratoma	7 days	Autopsy	0	NS	Died after acute respiratory failure
Yang WM et al, 2005(Yang, Chen, and Lin n.d.)	45 years	F	Taiwan	Chest pain and dyspnoea after accident	Ruptured cystic mature teratoma	11 days	Left lateral thoracotomy	1 day	10 days	Good after FU
Mori T et al, 2005(Mori et al. 2005)	20 years	F	Japan	Chest pain and palpitations	Mature teratoma	1 month	Median sternotomy	5 days	5 days	Good after 23 months FU
Kogure Y et al, 2005(Kogure et al. 2005)	28 years	M	Japan	Sudden onset of chest pain	Mature mediastinal cystic teratoma	3 weeks	Thoracotomy with resection	NS	NS	Good on FU
Kogure Y et al, 2005(Kogure et al. 2005)	36 years	F	Japan	Sudden onset of chest pain	Mature teratoma	17 days	Thoracotomy with resection	NS	NS	Good on FU
Popp G et al, 2003(Popp and Dragnev 2003)	27 years	M	USA	Progressive SOB	Mature teratoma, as well as pleural nodules with adenocarcinoma	NS	Thoracotomy and excision	NS	NS	Good on FU
Beduneau G et al, 2002(Beduneau et al. 2002)	25 years	M	France	Chest pain, fever	Benign mature mediastinal teratoma	Several months	Diagnostic mediastinotomy	NS	NS	Good on FU
Nagata K et al, 2002(Nagata et al. 2002)	27 years	M	Japan	Cough	Mature teratoma	NS	Thoracotomy	NS	NS	



<b>Panicker JN et al, 2001(Panicker et al. 2001)</b>	26 years	F	India	Catamenial dry cough and wheeze	Mediastinal teratomatous cyst with luteinized ovarian tissue	NS	Exploratory thoracotomy	NS	NS	Good on FU
<b>Smahi M et al, 2000(Smahi et al. 2000)</b>	12 patients with mean 32 years	7 F 5M	France	Chest pain was present in 10 cases; cough, dyspnea and septic episodes were present in 5 cases	Mature teratoma	NS	Posterolateral thoracotomy in 11 cases and an anterior thoracotomy in one case, pneumonectomy in 1 case, basal segmentectomy in 1 case and thymectomy in 1 case.	NS	NS	Morbidity included 2 phrenic nerve palsies, 1 pyothorax after pneumonectomy, 1 case of bleeding and 1 pleural effusion. No recurrences have been observed 5 to 87 months FU
<b>Yamamoto T et al, 1999(Yamamoto et al. n.d.)</b>	27 years	M	Japan	NS	Immature teratoma	NS	Thoracotomy with resection	NS	NS	After 2 years of FU, transformation of teratoma into rhabdomyosarcoma in Klinefelter syndrome resulting in death
<b>Ooshima M et al, 1999(Ooshima et al. 1999)</b>	23 years	M	Japan	Right-sided chest pain	Matured teratoma	NS	Thoracotomy with resection	NS	NS	Good on FU
<b>Yamamoto N et al., 1996(Yamamoto et al. 1996)</b>	43 years	F	Japan	Sudden chest pain	Mature cystic teratoma	NS	Thoracotomy with resection	NS	NS	

<b>Minami H et al, 1994(Minami et al. 1994)</b>	50 years	F	Japan	Cough and chest pain, serum CA19-9 level was high (204.4 U/ml)	Mature teratoma	NS	Resection of the tumor with adherent part of the right lung	NS	NS	Serum CA19-9 level returned to normal
<b>Suster S et al, 1994(Suster, Moran, and Koss 1994)</b>	Mean 23 years	3 M and 1 F	USA	Cough, chest pain, dyspnea, and left-sided pleural effusion	Two cases of solid variant of alveolar rhabdomyosarcoma, one case of embryonal rhabdomyosarcoma and one of pleomorphic rhabdomyosarcoma	NS		NS	NS	Recurrence and metastases within first 6 months for all. Three died within this period and one was lost to FU
<b>Hiraiwa T et al, 1991(Hiraiwa et al. 1991)</b>	27 years	F	Japan	Chest pain	Ruptured mediastinal cystic teratoma	NS	Surgical resection	NS	NS	Good on FU
<b>Yeoman LJ et al, 1990(Yeoman, Dalton, and Adam n.d.)</b>	24 years	F	UK	Acute chest symptoms	Mediastinal teratoma with fat fluid	NS	Surgical resection	NS	NS	Good on FU
<b>Reported cases with unspecified age</b>										
<b>Prabhakar G et al, 1987(Prabhakar, Nigam, and Williams 1987)</b>	NS		UK	Pericardial tamponade and pleural effusion	Benign teratoma	NS	Surgical resection	NS	NS	Good
<b>Cobb CJ et al, 1985(Cobb et al. n.d.)</b>	NS		NS	Chest pain	Anterior mediastinal benign cystic teratoma	NS	Surgery	NS	NS	Good

					ruptured into a pleural space					
<b>Tatsumura T et al, 1984(Tatsumura et al. 1984)</b>	NS			NS	NS	NS	NS	NS	NS	NS
<b>Oppermann HC et al, 1978(Oppermann and Willich 1978)</b>	NS		Germany	NS	NS	NS	NS	NS	NS	NS
<b>Basu Chaudhuri SK et al 1968(Basu Chaudhuri and Chakravorty 1968)</b>	NS		India	NS	Malignant teratoma	NS	NS	NS	NS	NS
<b>Robinson LA et al, 1994(Robinson, Rikkers, and Dobson 1994)</b>	NS		NS	Cough and chest pain, multiloculated pleural effusion	Large mature teratoma	NS	Surgical resection	NS	NS	NS
<b>Mayeur D et al, 2014(Mayeur et al. 2014)</b>	NS	F	France	Dyspnoea and non-productive cough	Mature cystic teratoma	NS	Resection by thoracotomy	NS	NS	Good on follow-up
<b>Choi SJ et al., 1998(Choi et al. 1998)</b>	NS		NS	NS	NS	NS	NS	NS	NS	NS

GA: gestational age, NS; not specified, SOB: shortness of breath FU: follow-up, EXIT: ex utero intrapartum therapy

