



Clinical Case

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Pulmonary Mediciene

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Case Report
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A Case of COVID-19 Infection Complicated by Peripheral Neuropathy, Pulmonary Embolism, Lung Fibrosis and Tuberculosis: A Rare Case Report from Syria

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Abstract

We report an interesting case of COVID-19 infection filled by complications (tuberculosis, pulmonary embolism, post COVID-19 lung fibrosis and Peripheral neuropathy). The patient was a 58 years old Syrian male. He reported to us in the emergency department with chief complaints of cough with expectoration associated with fever, chest pain, sore throat, headache, shortness of breath. His complaint started 10 days ago.

The diagnosis of tuberculosis in the current pandemic of COVID-19 required a high degree of suspicion to rule out the SARS-CoV-2 infection along with the infection of *Mycobacterium tuberculosis*, and because the clinical presentations in the two diseases are quite similar. Also there are many complications of COVID-19 infection, some are very rare, serious and life-threatening such: Pulmonary embolism, peripheral neuropathy and fibrosis. Thus the present case will serve as a tool to help the clinicians handling cases of both the viral and bacterial infection across the global, importance of giving attention to severe complications of COVID-19 infection and treatment them.

Keywords: Tuberculosis; COVID-19; Lung fibrosis; Peripheral neuropathy

Our patient is 58 years old, Syrian, male .

Active smoker (20 packet\year) .

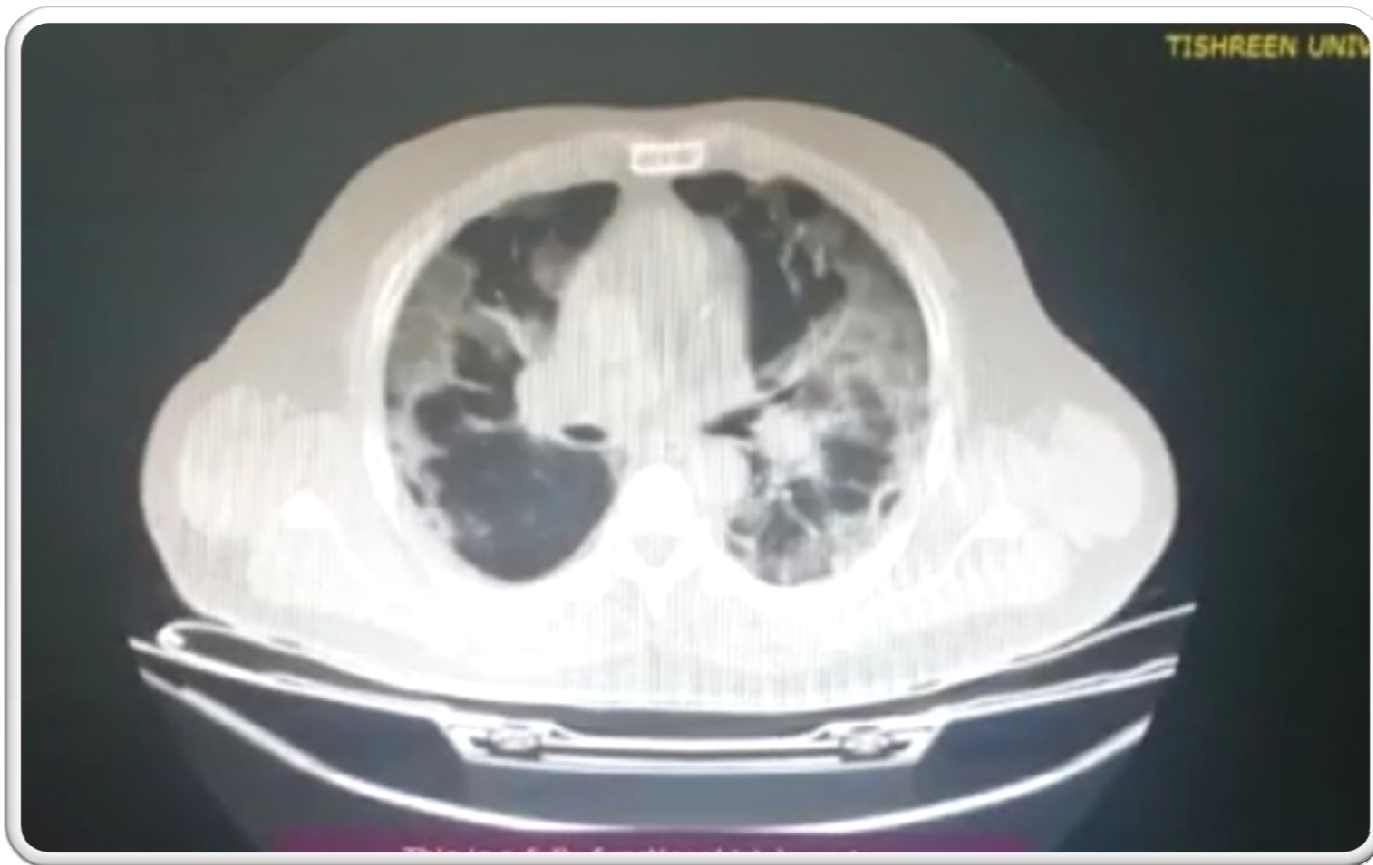
No remarkable medical surgical or drug history.

No traveling history, No history of alcohol consumption.

He has **hospitalized for one week with covid-19** from 3 weeks ago .

He treated with corticosteroid , oxygen and blood thinners and discharge

after improvement with no oxygen therapy.



Ct scan on 11 November 2020 showed bilateral areas of interstitial densities , ground –glass opacities with mainly a peripheral and lower lobes distribution

1 He complains of lower limbs weakness one week ago

with

1 Suddenly developed chest pain and dyspnea From

24hours.

linical presentation

Responsive , conscious .

Shortness of breath , Tachypnea , with a respiratory rate of 28 breaths
\min, oxygen saturation (SPO2) on air room 84%.

Heart rate : 115 beats per minute .

Blood pressure: 11\7mmHg .

Temperature: 37,5

Auscultation : crackles in the lower sections .

Laborations

white blood cells (WBC)	(11,6x 10 ³)	Gra:70%
RBC	3,19x10 ⁶ /uL	
HGB	13,5 g\dl	
PLT	220 x10 ³ /uL	
Elevated CRP	(68 mg/l)	
Ddimer	3100 mg/l	
LDH	600 U\L	
PT, INR	90% -14,3sec - 1,13	
CREATININE	0,8	

ABG: PH : 7,45 PCO2 : 33mmHg PO2 : 58mmHg



Acute Respiratory Failure with Lower Limbs Weakness

**Pulmonary
complication**



**Nervous
complication**



We completed CT pulmonary angiogram and
asked for a neurological consultation



CT pulmonary angiogram showed **right main** pulmonary artery **embolism** and **right lower** pulmonary artery embolism

The neurological consultation showed :

- ❑ The patient was completely oriented with lower limbs weakness.
- ❑ The neurological examination showed :
 - ❖ Absent of tendon reflexes without sensory abnormality .
- ❑ Nerve conduction study: axonal neuropathy .
- ❑ Cerebrospinal fluid (CSF) was normal.
- ❑ CT scan of the brain was normal .
- ❑ Neurologist ruled out Guillian –Barres syndrome and suggested ***multiple peripheral neuropathy*** .

ve quickly started treatment with anticoagulants , vitamin b12 , Alpha lipoic acid and physiotherapy for 3 months .

After 3 days of treatment , we **noticed significant clinical improvement** (spo2: 98% , absence of chest pain , improvement weakness, and improvement shortness of breath).

laboratory tests improvement: **decreased in D-Dimer level**

The patient has been **discharged** in excellent condition **with normal SPO2** .
continues physiotherapy , vitamin b12 , anticoagulants and Alpha lipoic Acid.

After three weeks of the discharge(after 7 weeks of corona virus start) , the patient started to suffer from **increased of shortness of breath on exertion** , cough , **nocturnal dyspnea** , fatigue , loss of weight and **fever**

Clinical examination

Heart rate 95 beats per minute

Blood pressure 12\7mmHg

PO₂ on air room 95%

Temperature 38,5

Auscultation: **crackles in the lower sections**

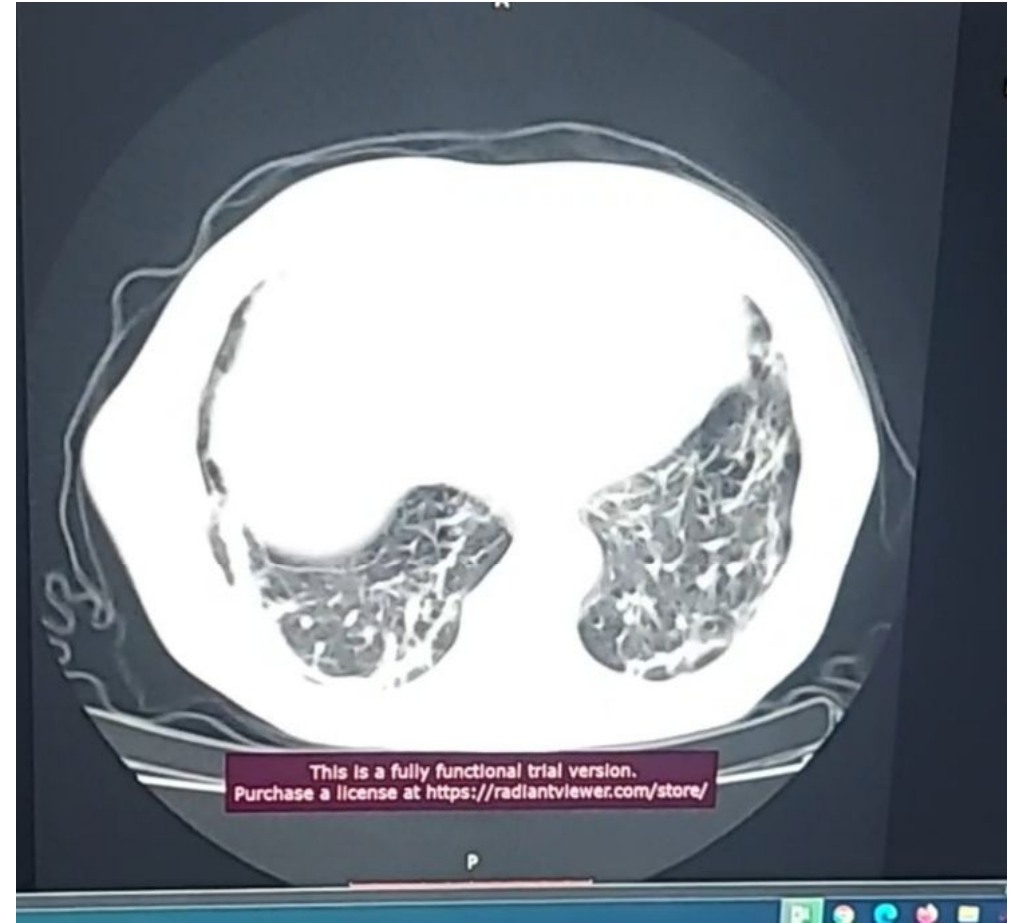
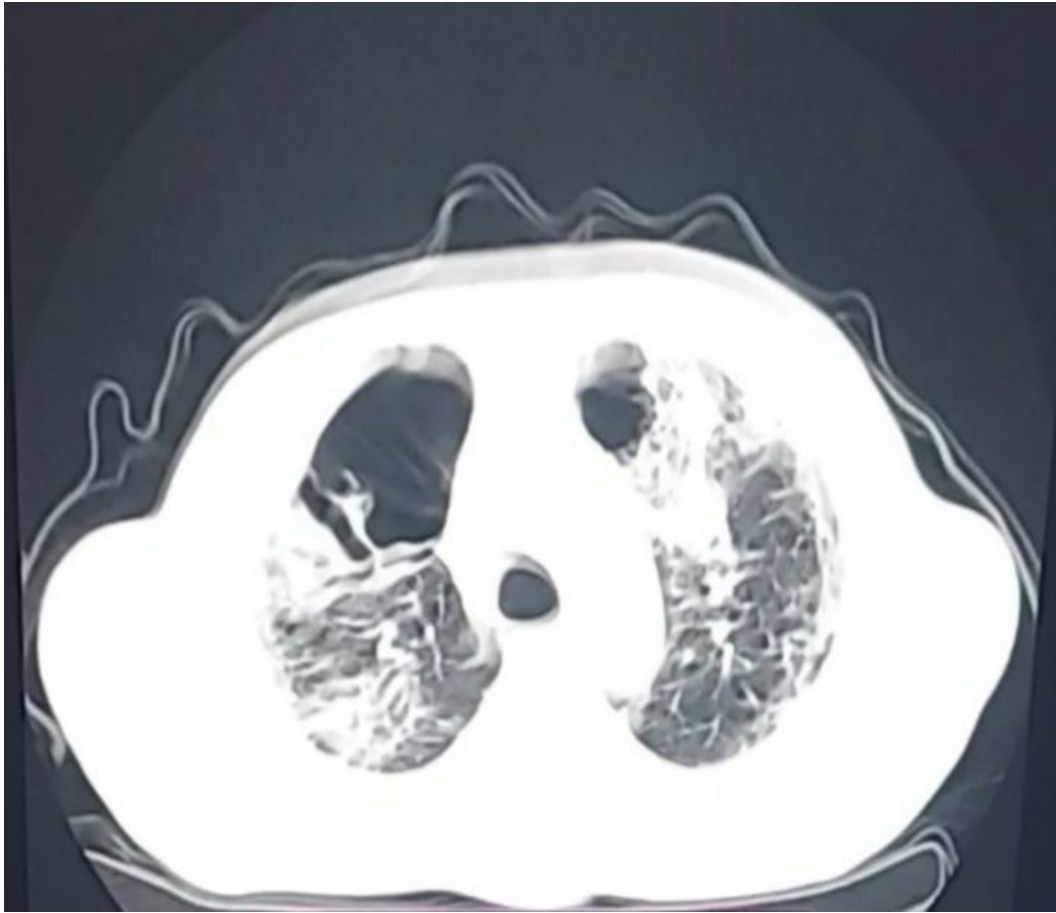
CXR : bilateral areas of parenchymal and interstitial densities in the upper and lower lung fields.



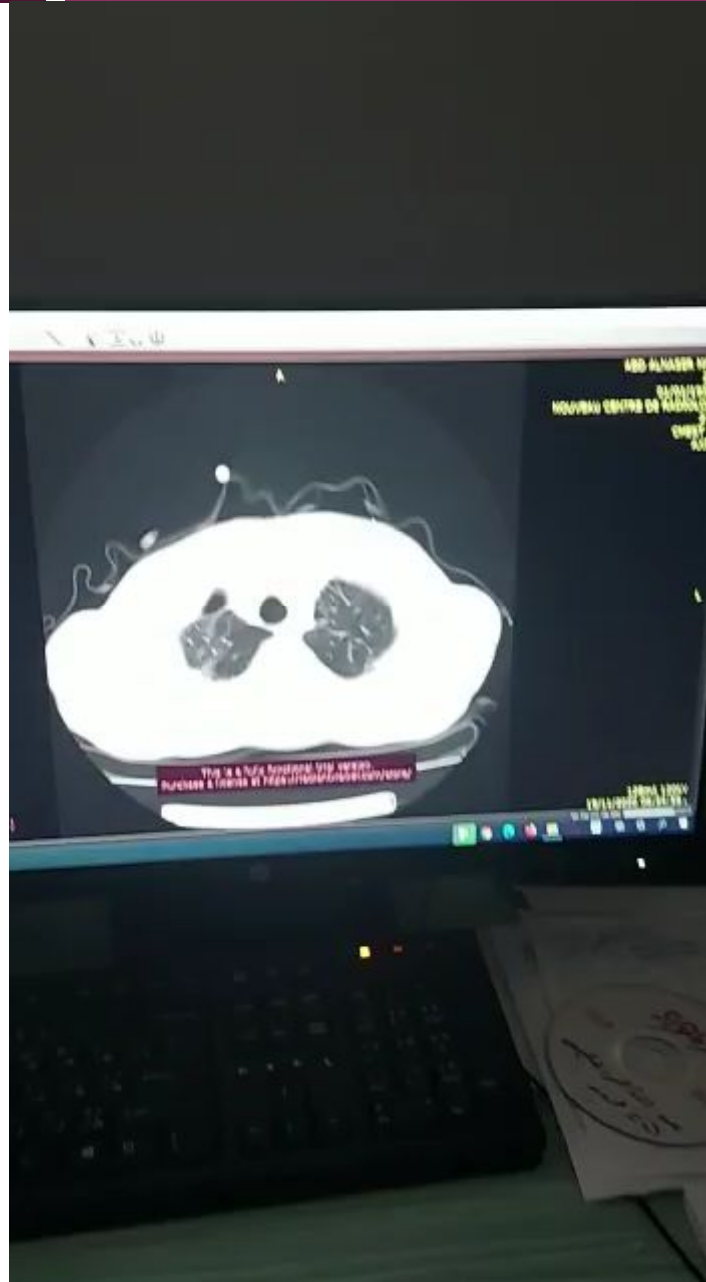
Bilateral areas of parenchymal and interstitial densities predominantly in the upper fields

Laborations

WBC	(8,4 x 10 ³)
RBC	(4,30 x10 ⁶ /uL)
HGB	10,1 g\dl
MCV	92,8 fL
ESR	95 mlm\hour
CRP	44 mg\l
Ferritin	530 µ\l
Creatinine	0,8mg\dl



scan : bilateral **parenchymal bands and fibrotic consolidation** in the periphery of the lungs with irregular thick walled **cavitary lesions** in the right lung



we ordered the nucleic acid amplification test (NAAT) that was performed on tum specimens (Xpert MTB\RIF test) : **positive** with mycobacterium tuberculosis sensitive to rifampicin .

we could not made pulmonary function test because the patient had emphysema and active tb



The patient has started on tuberculosis therapy.

Clinical and laboratory improvement within a month of treatment

The patient has continued his tuberculosis therapy with no tolerance, no other complications of COVID-19.

The patient has finished his tuberculosis therapy and after 2 weeks **hemoptysis, fever and cough come back** (after 8 months of corona virus start) no other symptoms.

Clinical examination

Heart rate 90 beats per minute

Blood pressure 12\8 mmHg

(SPO2)on air room 95%

temperature 38.9

auscultation: normal

Laborations :

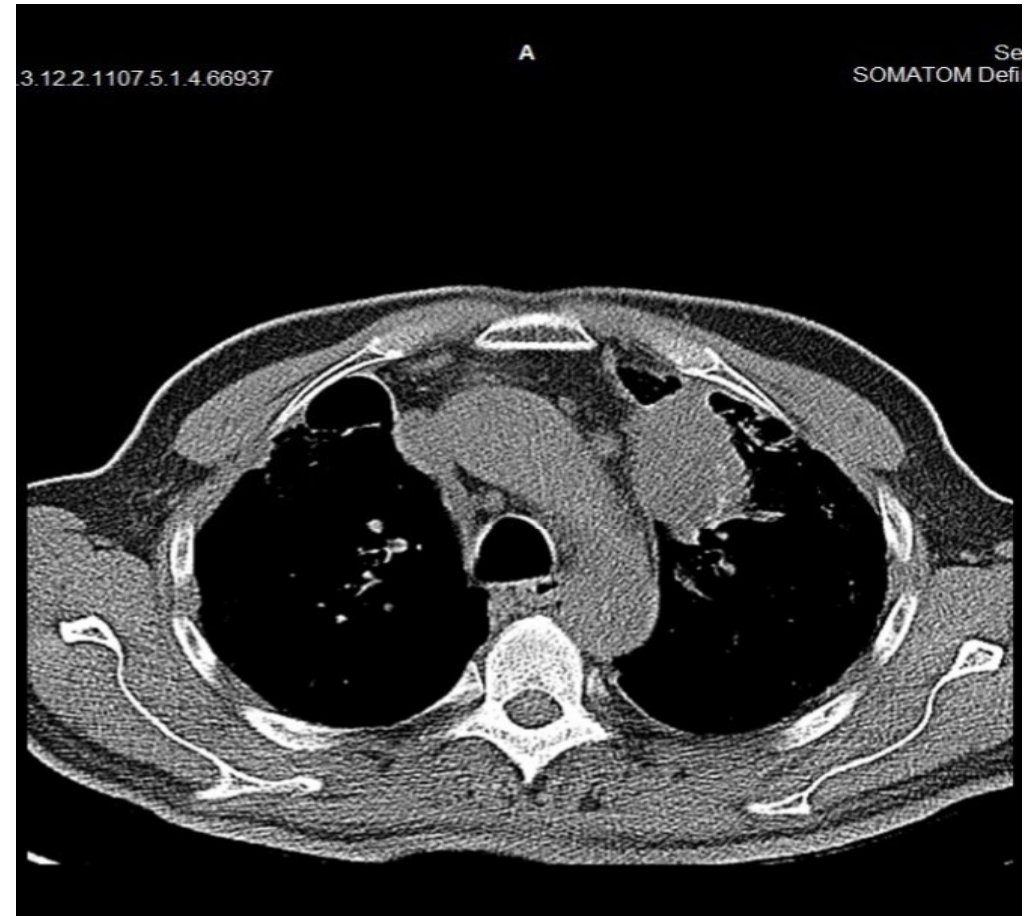
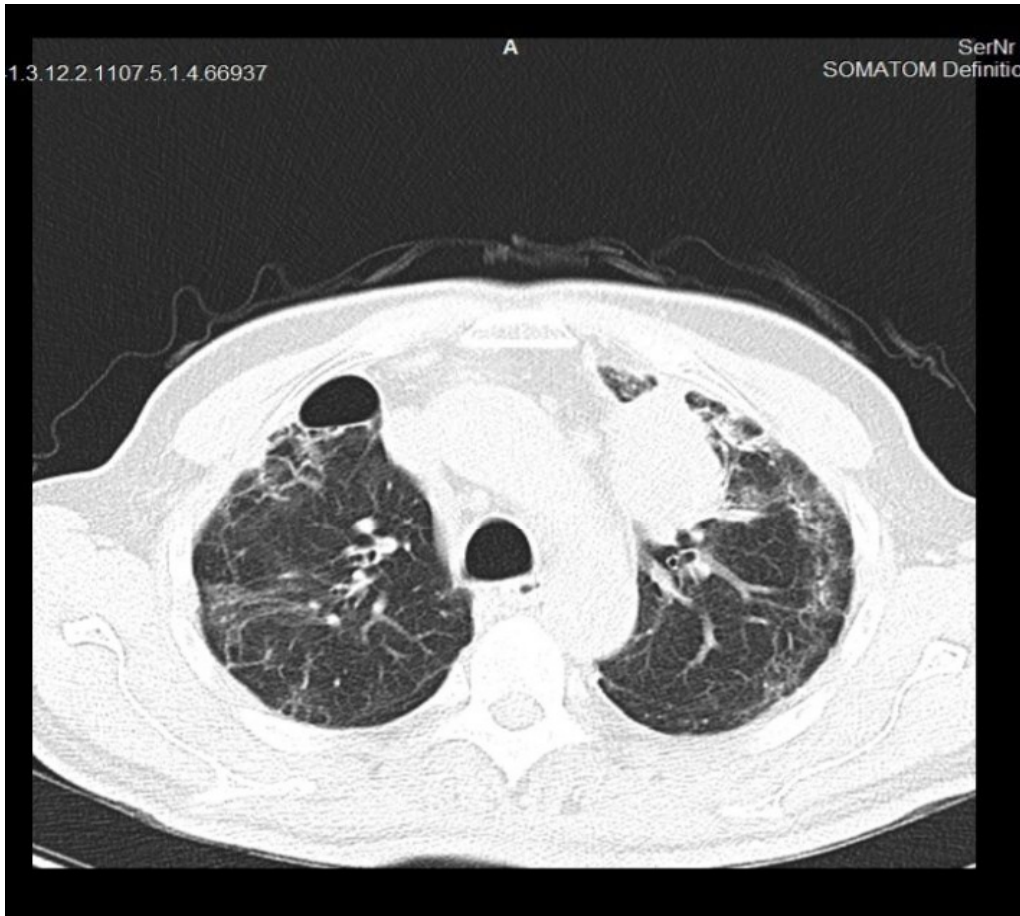
Wbc : $14,5 \times 10^3$.

GRA: 85% .

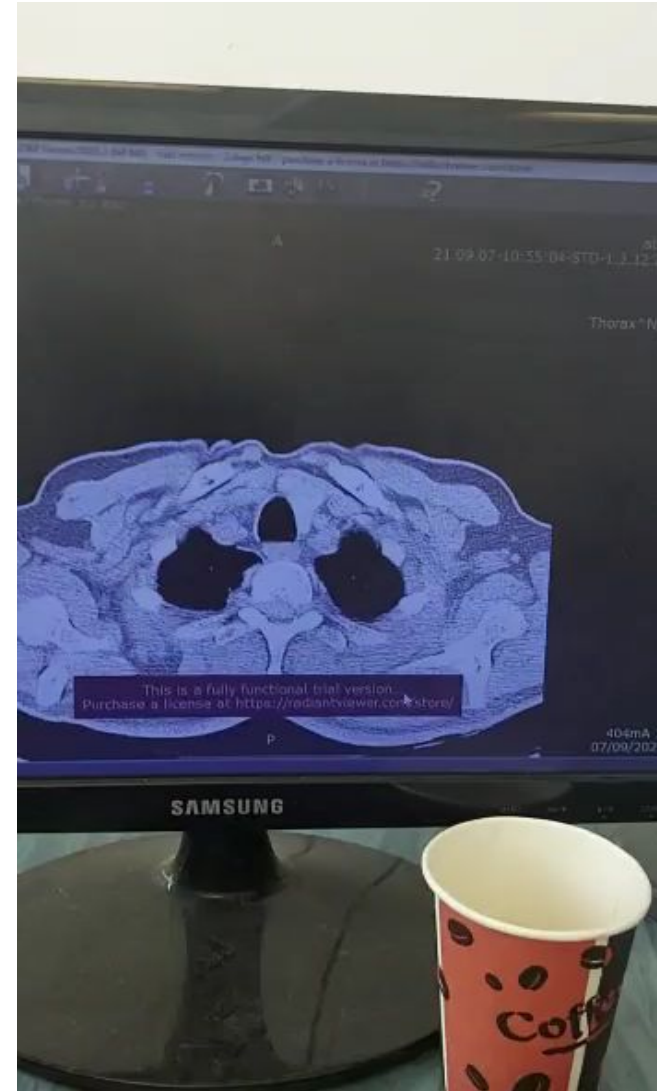
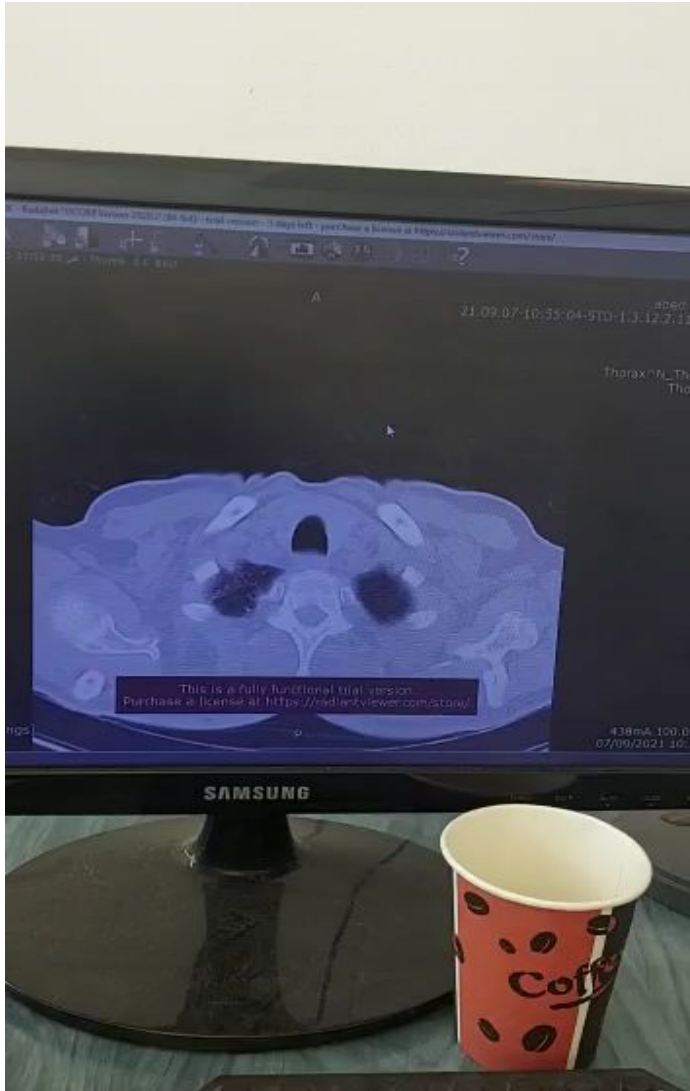
Crp : 45 mg\dl.

Creatinine :0,8 mg\dl

ESR : 70mlm \hour



Heterogeneous mass in the anterior segment of the left upper lobe with **small nodes** in front of the aortic arch, Right upper lobe band consolidation with **small air bubble**





Differential diagnosis :

- Pulmonary lymphoma
- Lung cancer
- Tuberculoma
- Round pneumonia

bronchoscopy:

mucosal congestion in the left upper lobe

.L: Cytology – TB : negative

biopsy : negative

CT guided biopsy:

o malignancy - Non specific acute inflammation.

limited material composed of fatty tissue , pleural and lung tissue showing mild acute inflammatory changes . There is no evidence of malignancy .

decided to start antibiotic and antifungal (**Levofloxacin,**
terbinafine, Flagyl) and then return evaluation .

The patient come back **after 5 months** with **exacerate hemopt** and **cough** with expectoration .

❑ **Clinical examination**

- ✓ Heart rate 90 beats per minute
- ✓ Blood pressure 12\8 mmHg
- ✓ (SPO2)on air room 95%
- ✓ Auscultation: N
- ✓ Temperature:N

❑ **Laborations** : Normal

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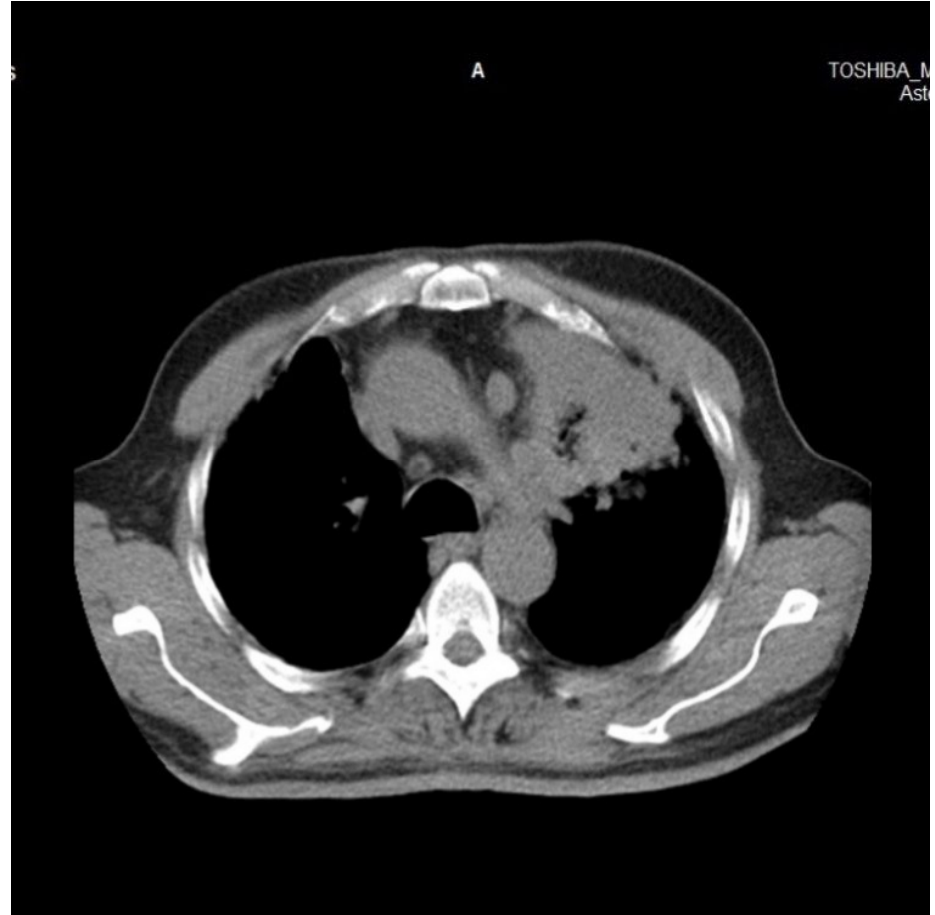
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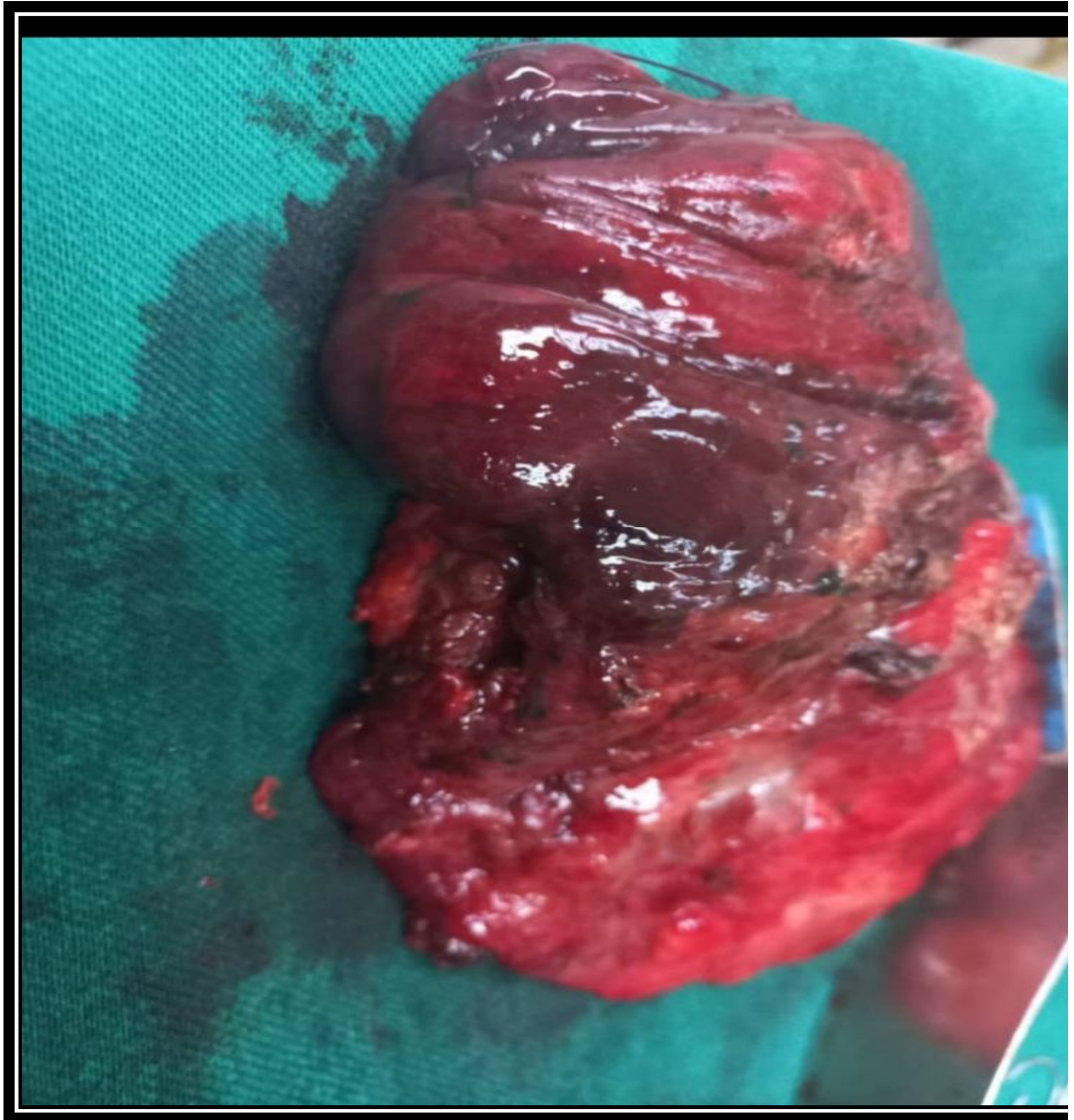
Left superior lobe alveolar consolidation with parenchymal distortion and **inferior cave** with **calcification** in the lobe

The bronchoscopy was repeated:

- Mucosal congestion the left upper lobe with large amounts of purulent secretions .
- BAL: normal



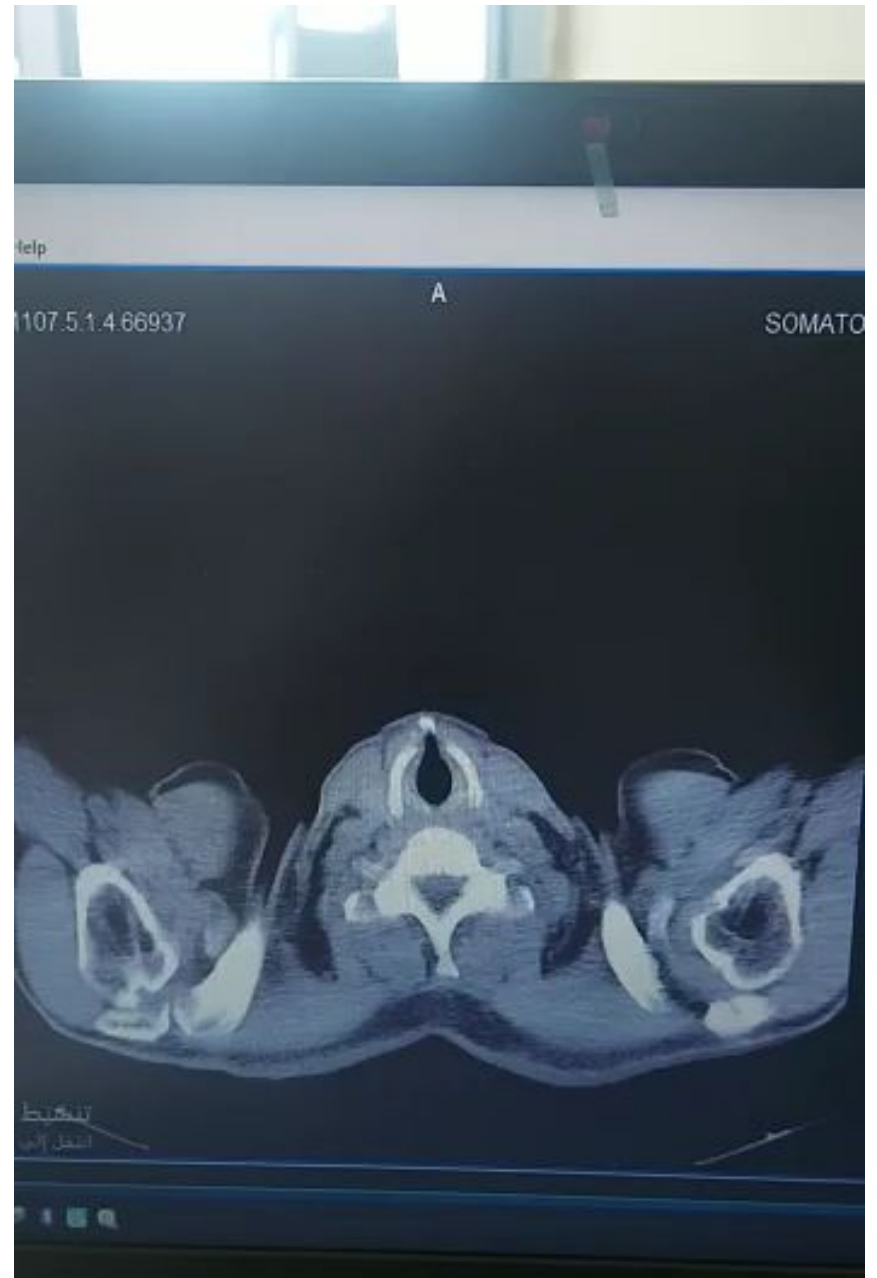
Surgery is done: left upper lobe was removed



PATHOLOGY REPORT

No cellular atypia noted within the limits of examined specimen ➤

Lung abscess



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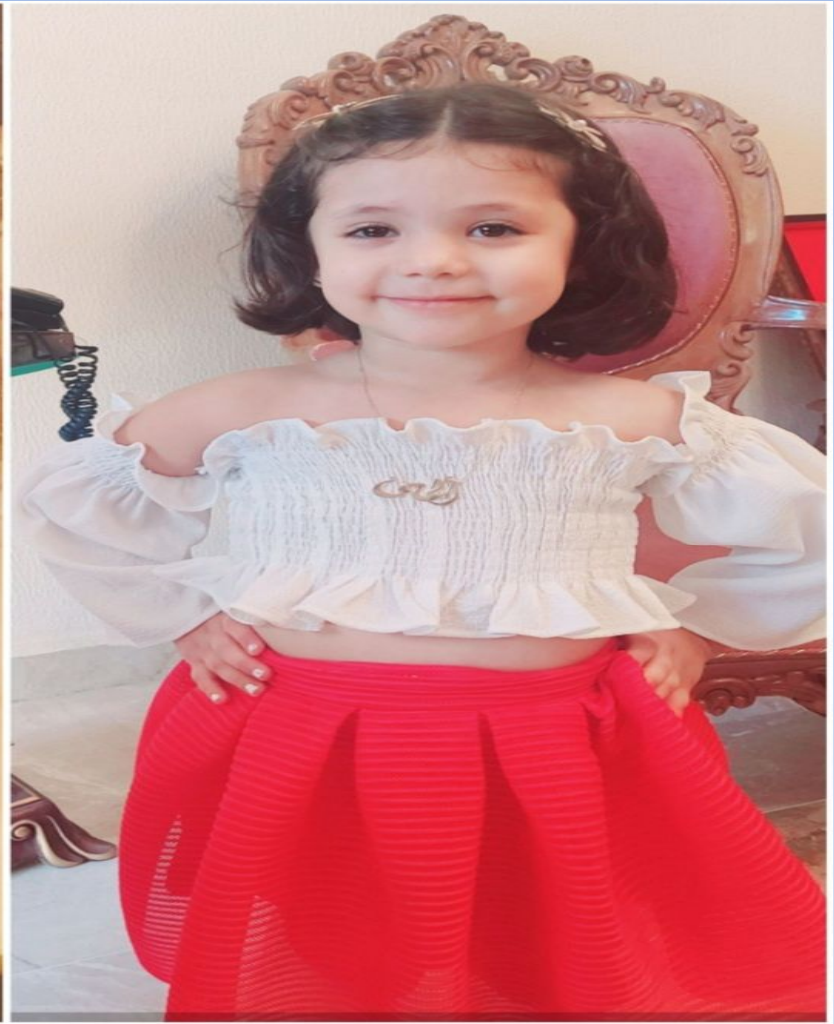
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