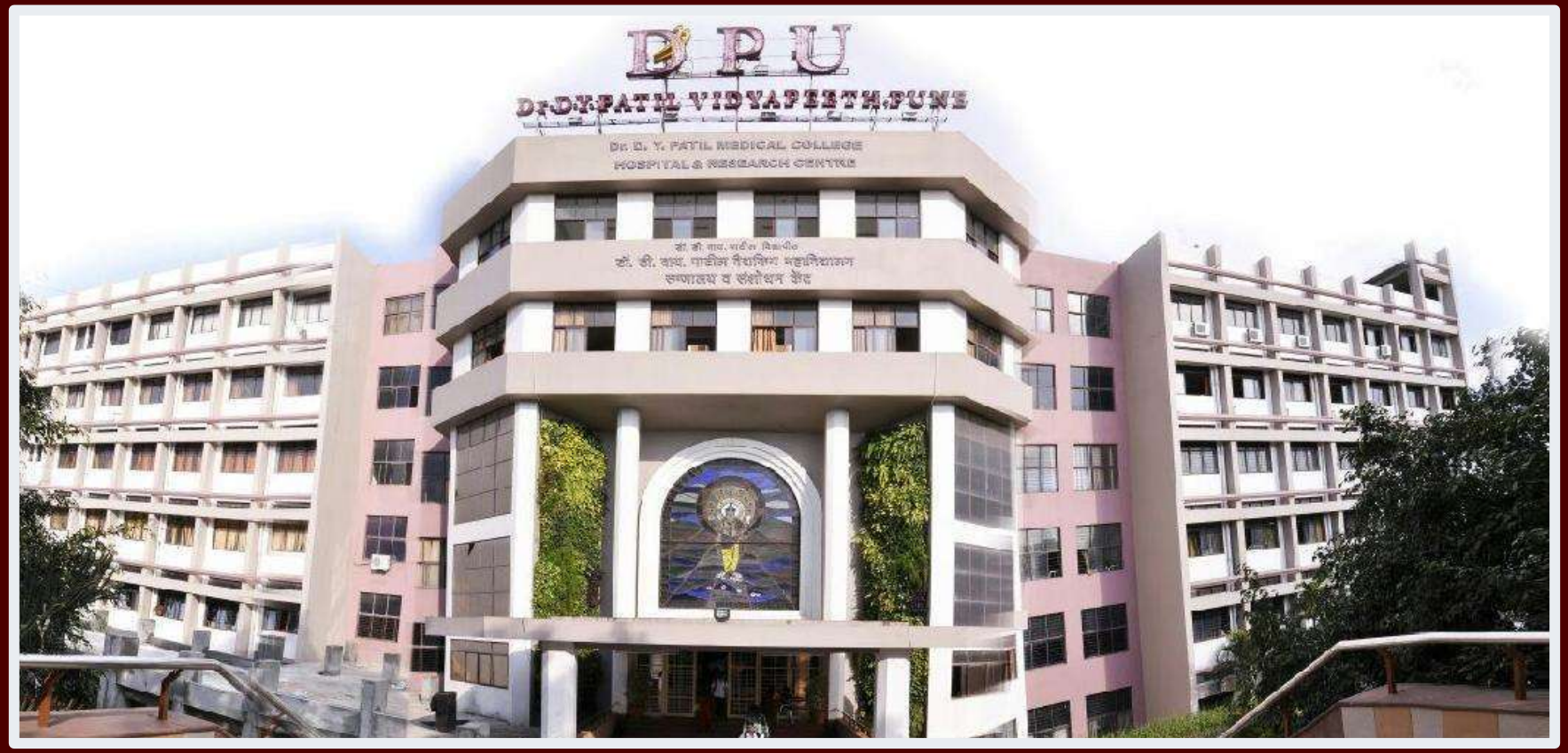
A Rare Case of Cystic Lung Metastases In Choriocarcinoma



Dr. Pratiksha Dutta

Resident

Department of Respiratory Medicine

30-year-old young female, homemaker
No known comorbidities

CHIEF COMPLAINTS

Dry cough x 1 month

Progressive breathlessness x 20 days

Weight loss & loss of appetite x 20 days.

1 episode of streaky hemoptysis 15 days ago

H/o - mid menstrual cycle spotting,
H/o uncomplicated pregnancy 1 year ago

Clinical Examination

- PR – 111/ min
- **RR – 28/ min**
- **Spo2 – 91 % on RA**
- BP – 110/60 mm Hg
- RS – Bilateral diffuse crepitations
- Other systemic examination – NAD

Initial Lab Investigation

Acute hypoxemic respiratory failure (type 1)

ABG

Fio2 21

- pH 7.37
- pCO2 38
- pO2 59
- HCO3 23
- SO2 90
- ***P/F 280***

- ***Hb (G/DL)- 9.0***
- TLC - 4200
- PLATELET(L) - 2.78

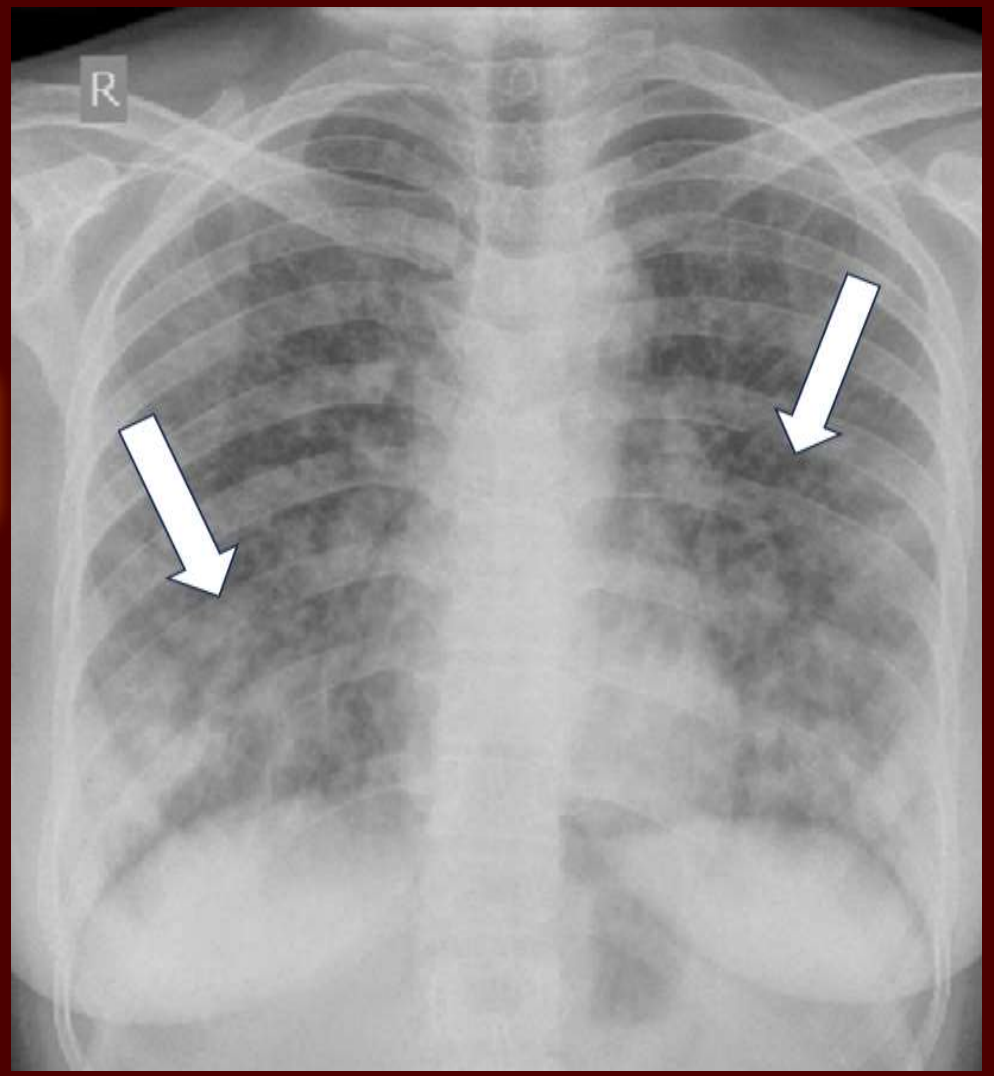
- RFT – WNL

- LFT – WNL

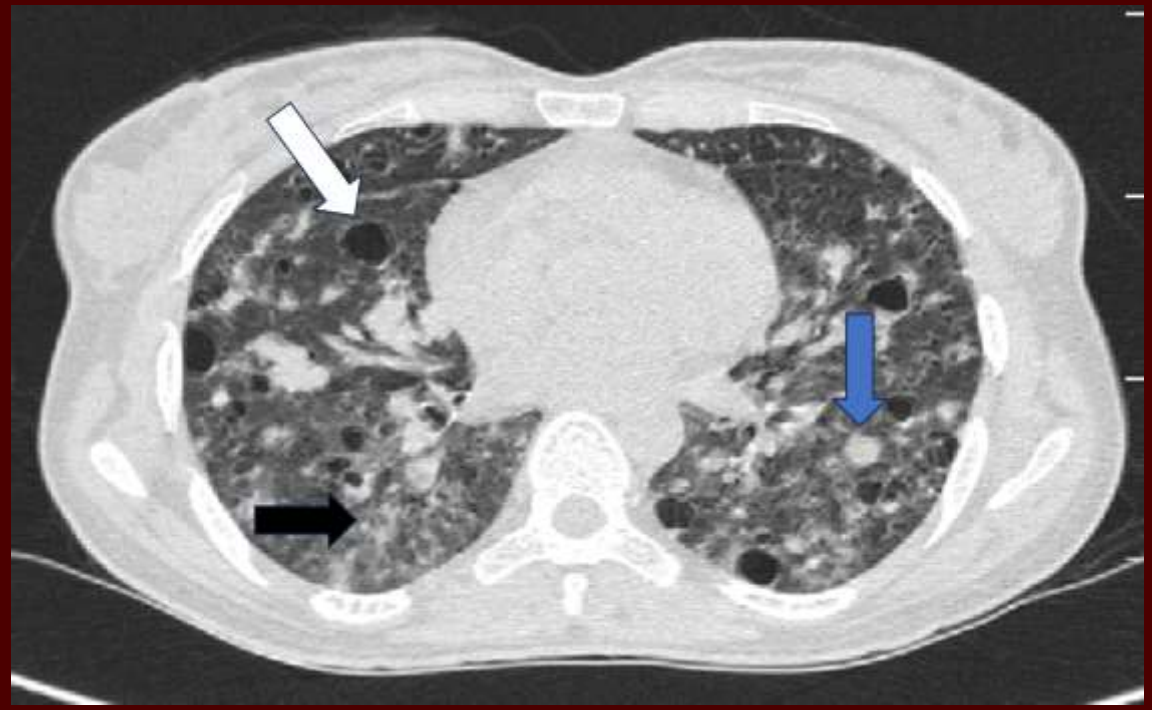
HIV, HCV, HBsAg - NR

Radiological Investigations

CXR PA – B/L diffuse alveolar opacities



Radiological Investigations



HRCT Thorax - Multiple cysts, lung nodules and ground glass opacities in bilateral lung fields.

Radiological Investigations

USG A/P – s/o bulky uterus (11cm x 8cm x 9cm)

Initial Clinical Diagnosis

Based on history and radiological picture

- ATYPICAL PNEUMONIA
- PULMONARY TUBERCULOSIS

Course in Hospital…

Started on **oxygen therapy** at the rate of 1 liter oxygen/ minute via nasal prongs in view of **acute hypoxemic respiratory failure (Type 1)**.

ATT continued (which was started on radiological basis 2 weeks ago by a local practitioner)

Course in Hospital Contd…

I/V/O CT picture s/o – B/L diffuse alveolar opacities, nodules and cysts,

Fibre optic bronchoscopy – bronchoalveolar lavage & transbronchial lung biopsy was planned

BAL CBNAAT and AFB SMEAR - NEGATIVE

Unexpected Revelation!!!

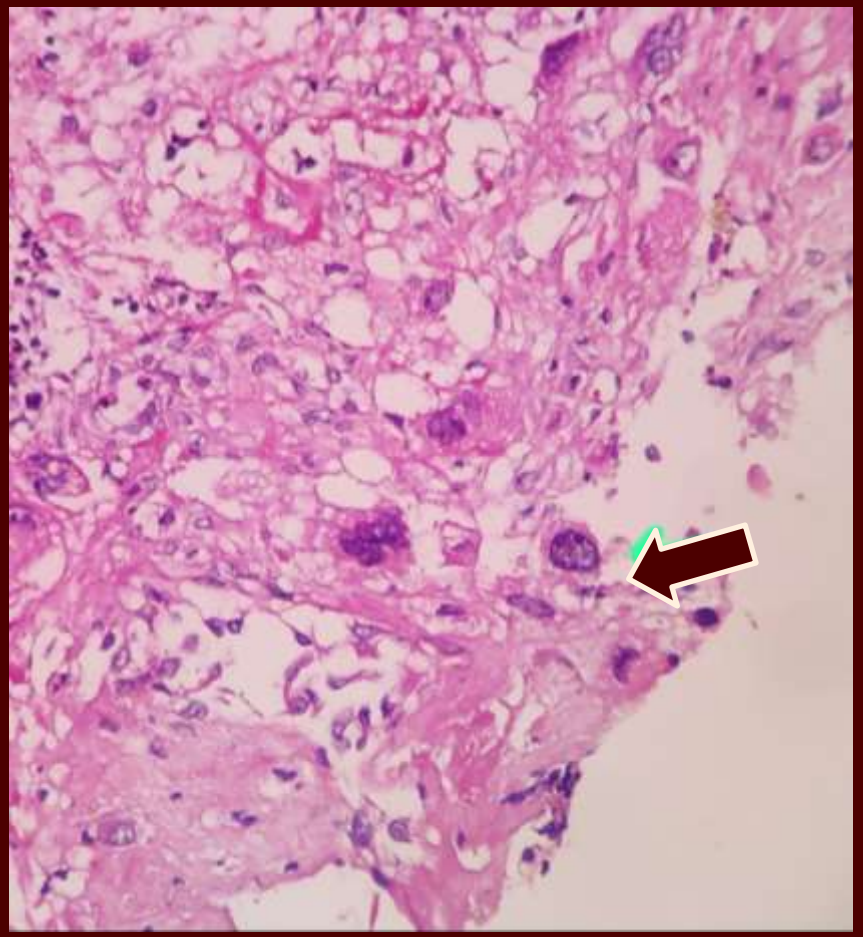
Transbronchial lung biopsy

s/o

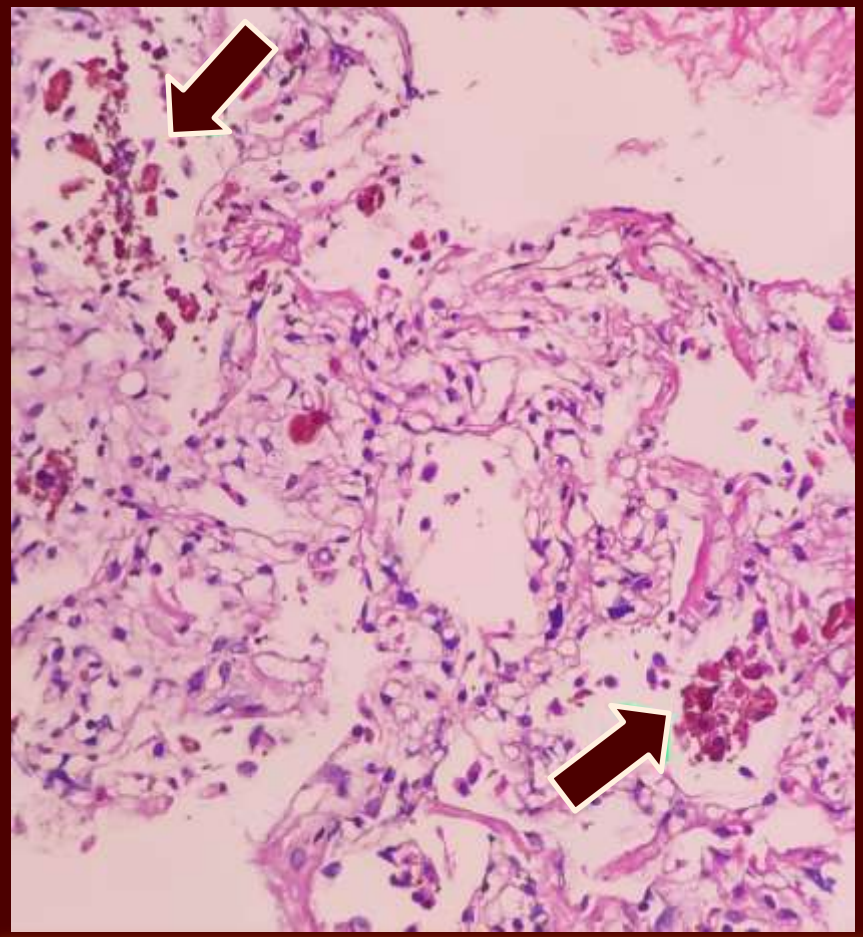
Metastases of Malignant Trophoblastic Tumor

favoring Choriocarcinoma

Histopathological Examination



H & E staining of lung biopsy under high power microscopy - large tumour cells with hyperchromatic nuclei. ***(cytotrophoblasts***)



H & E staining of lung biopsy showing hemosiderin laden macrophages in alveolus indicating old haemorrhage

Further Lab Investigation

I/V/O CT picture, h/o – menstrual disturbance, USG AP and HPE findings

▼

High suspicion of choriocarcinoma

BETA – HCG	ANA Blot
9884 mUI/ml	Negative

Immunohistochemistry Markers

Strongly positive for - CK7, GATA3 and beta hCG and are weakly positive for PLAP

They are negative for p63, TTF1 and SALL4

Serum beta hCG - 9884 mUI/ml

She was diagnosed with stage IV choriocarcinoma

Anti tubercular therapy which was started by a local practitioner was stopped

Course in Hospital Contd…

A **medical oncology** reference for further managemet and **OBGY** reference for planning a hysteroscopy guided biopsy was given.

Chemotherapy 1st dose given - Inj Etoposide 100mg IV & Inj Cisplatin 30mg IV X 2 days
Inj rHu G-CSF (recombinant human granulocyte colony stimulating factor) x 2 days post chemotherapy.

OBGY advised no need of hysteroscopic guided biopsy in view of established diagnosis

Course in Hospital Contd…

She was then discharged on LTOT in view of hypoxaemia

Followed up after 1 week – 2nd cycle chemotherapy given

Inj Vincristine 2mg IV & inj Cyclophosphamide 800mg IV x 2 days

inj rHu x 2 days post chemotherapy.

Course in Hospital Contd…

Serum **beta hCG** was repeated

▼

Significant reduction from 9884 mUI/ml to 3733.95 mUI/ml

▼

Follow up 1 week later for 3rd dose of chemotherapy

▼

However, she reported to EM only 4 days later with ***increase in breathlessness, tachypnoea, fever & severe hypoxaemia****.*

Course in Hospital Contd…

The patient was admitted to RICU & put on ***non-invasive mechanical ventilation pressure support mode***.

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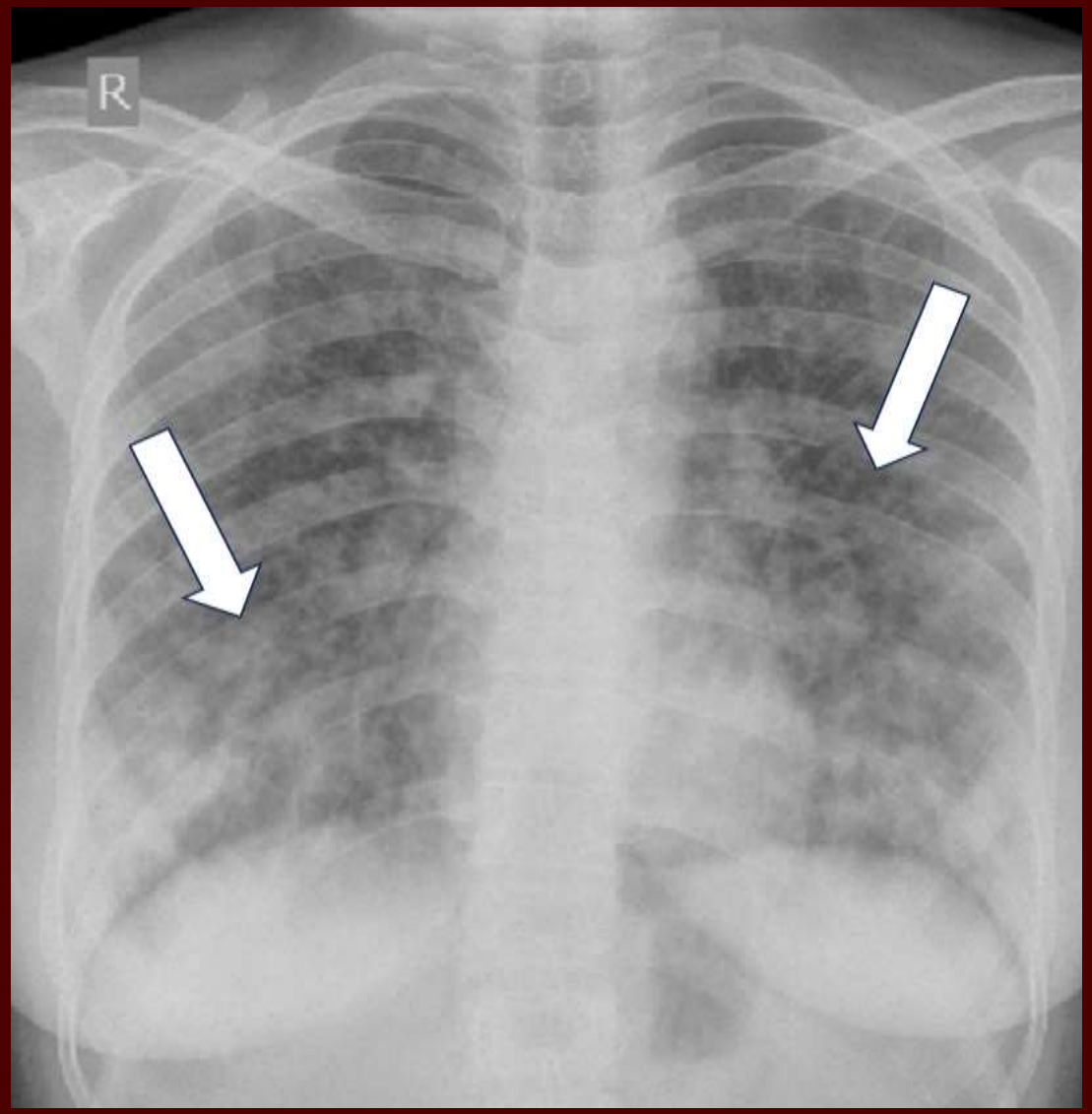
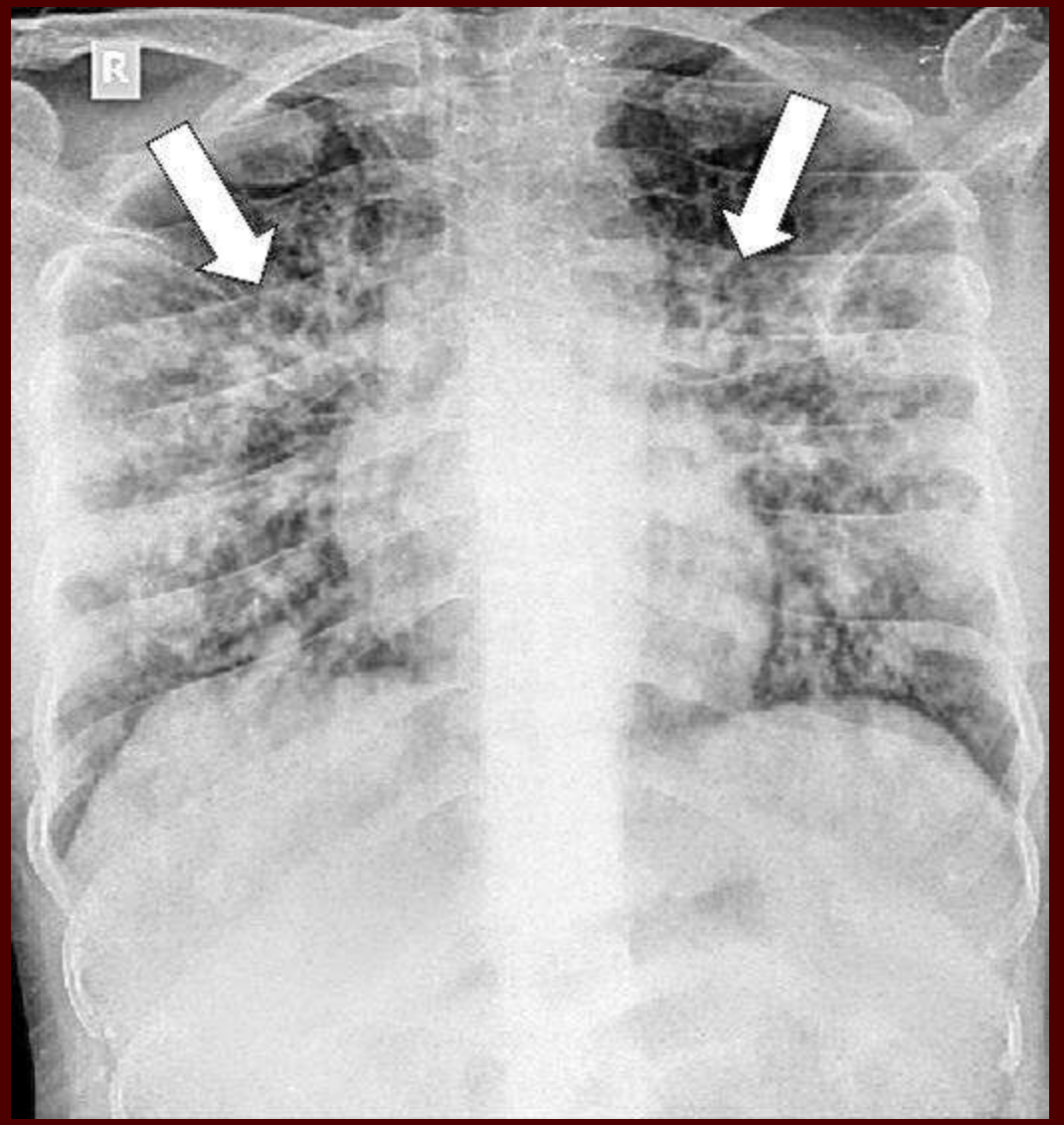
CXR repeated - further increase in bilateral alveolar opacities compared to previous CXR.

Repeat CBC - TLC – 15500/µL (N – 89%)

BEFORE



AFTER



Course in Hospital Contd…

She was empirically started on higher antibiotics - **inj meropenem, inj linezolid** to cover any secondary pulmonary infection

⇩

She was also started on **Inj enoxaparin heparin (prophylactic dose)** in view of suspected pulmonary embolism

⇩

2D Echo - normal study

Course in Hospital Contd…

I/V/O increasing hypoxia and deteriorating condition, she was put on **invasive mechanical ventilation**

↓

3rd dose of chemotherapy was WITH HELD

↓

Ultimately, she developed features of s/o septic shock and started requiring vasopressors and finally succumbed to her illness as a result of secondary infection.

Discussion

Cavitary lung lesions are well-known findings in metastatic tumours; however, ***cystic lung metastases is extremely rare.***

Metastatic cystic lung lesions have been reported secondary to different types of cancers, including seminoma, Ewing's sarcoma, myxosarcoma, Wilm's tumour, osteogenic sarcoma, angiosarcoma, transitional cell carcinoma, teratocarcinoma

Review of literature showed that only a few number of cases have been reported that also from abroad

Discussion

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Unusual Case of Diffuse Cystic Lung Disease Due to Metastatic Choriocarcinoma

D. Baral [2], A.P. Maskey [1],
https://doi.org/10.1164/ajrccm-conference.2019.199.1_MeetingAbstracts.A2284

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A70 UNUSUAL PRESENTATIONS AND MIMICS: WHAT YOU SEE IS NOT ALWAYS WHAT YOU GET / Thematic Poster Session / Sunday, May 19/9:15 AM-4:15 PM / Area J (Hall F, Level 2), KBHCCD

Unusual Case of Diffuse Cystic Lung Disease Due to Metastatic Choriocarcinoma

D. Baral[1], A. P. Maskey[2]; [1]Pulmonary and critical care medicine, University of Kentucky, Lexington, KY, United States, [2]Kentucky Clinic, UK Health Care, Lexington, KY, United States.

The radiological appearance of metastatic cystic lesions

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Abstract

Introduction. Cystic and cavitatory pulmonary lesions are abnormalities encountered on chest computed tomography (CT). Malignant lesions, including metastases, rarely present as cystic lesions; we report on two such cases: a man with advanced carcinoma of the left testis, and a woman with epithelioid trophoblastic tumour.

Discussion. The lungs are the most common site for metastases from non-pulmonary neoplasms. The appearance of cystic lesions in the lung in malignancy is rare and predisposes to spontaneous pneumothoraces. Multiple cystic lesions occur commonly in bronchus carcinoma and also sarcoma, bladder cancer and, less commonly, lymphoma and metastasis. Both chemotherapy and immune suppression can induce cavitation in malignant lesions. Tumour necrosis and tumour infiltration of air-containing spaces with a check-valve mechanism are postulated for causing these cystic lesions. Spontaneous resolution is the rule. Close follow-up is recommended as these spaces may become infected.

Conclusion. CT is the mainstay of diagnostic imaging in cancer patients. Cystic lung lesions are caused by a diverse array of pathological processes, and are rare in metastatic disease.

Ours is the 1st case of cystic lung metastases in choriocarcinoma from India!!

Clinical Pearls

In a young female, with ***antecedent history of pregnancy, with menstrual irregularity, and with this kind of CT picture***, possibility of choriocarcinoma should be considered

All efforts should be made to get a **tissue diagnosis.**

Thank You