



ACUTE MYELOID LEUKEMIA WITH PULMONARY TUBERCULOSIS AND COVID 19.

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ABSTRACT We report the case of a 64 -year-old K/C/O AML presenting with fever, cough, anorexia and weight loss. Blood investigations revealed lymphocytosis. Chest imaging showed fibrotic changes in upper lobes of both lungs. Bronchoalveolar lavage showed Acid fast bacilli hence we came to the diagnosis of pulmonary kochs and treatment with isoniazid, rifampicin, pyrazinamide, and ethambutol was started.

KEYWORDS : AML , PULMONARY TUBERCULOSIS, COVID 19

INTRODUCTION :

-Tuberculous infections are serious and life threatening conditions in patients with hematological malignancies .

-There are several reports of tuberculosis occurring during treatment of hematological malignancies including leukemia, so high index of suspicion should be maintained in patients coming from endemic areas with clinical and radiological manifestations compatible with tuberculosis.

-The incidence of active pulmonary tuberculosis has gradually declined; however, patients with hematological malignancies are more prone to infections due to the disease itself, repeated intensive chemotherapy, and because they are immunocompromised , sometimes even infection or resurgence of tuberculosis.

CASE REPORT :

A 64 year old male k/c/o AML presenting with C/O

-Fever since 15 days

-dry cough since 15 days

-c/o loss of weight and loss of appetite since 15 days .

HISTORY OF PRESENTING ILLNESS :

- fever since 15 days low grade in nature with evening rise of temperature

- Dry Cough since 15 days sudden in onset , gradually progressive no diurnal variation.

INVESTIGATIONS :

HB : 11 GM/DL

RBC : 4.1 Lakhs

WBC : 19000

PL : 1.1 Lakhs

Other routine blood investigations done - within normal limits .

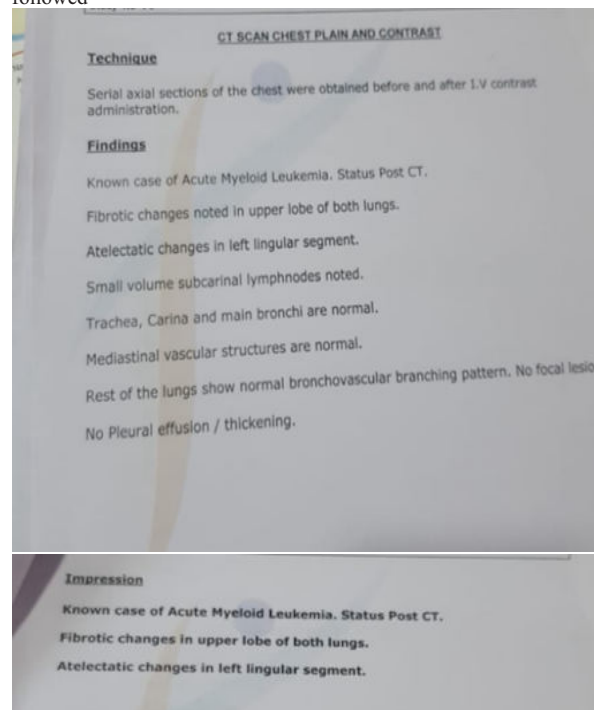
CHEST XRAY (PA VIEW) = Showed fibrotic changes in upper lobes of both lungs .

CT SCAN CHEST PLAIN AND CONTRAST :

Fibrotic changes in upper lobe of both lungs .

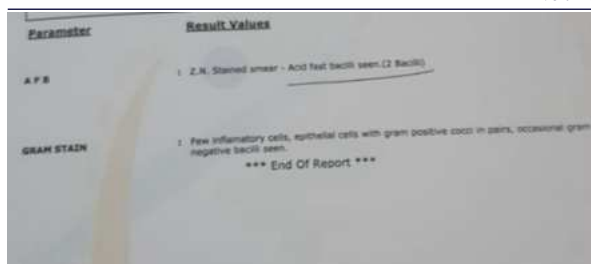
Atelectatic changes in left lingular segment .

Bronchoscopy was done BAL sample was obtained and reports as followed



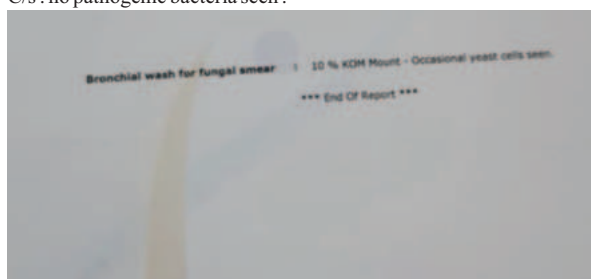
AFB : Z N stained smear - acid fast bacilli seen

GRAM STAIN : few inflammatory cells , epithelial cells with gram positive cocci in pairs, occasional gram negative bacilli seen .



FUNGAL SMEAR : 10% KOH mount - occasional yeast cells

C/s : no pathogenic bacteria seen .

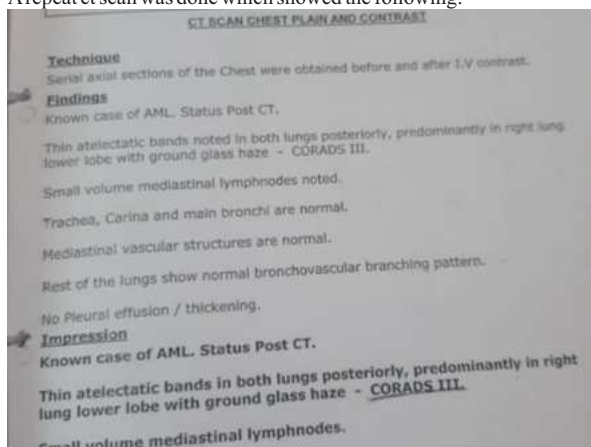


Pt was immediately started on ATT and was followed up regularly .

After 4 months pt again presented with C/O

- Fever with chills and rigors since 4 days
- cough with sputum (white in colour) since 4 days
- SOB (GRADE III MMRC) since 3 days

A repeat ct scan was done which showed the following:



Thin atelectatic bands in both lungs posteriorly predominantly in right lung lower lobe with ground glass haze - CORAD III Small volume mediastinal lymph nodes

Pt was treated symptomatically with antivirals, antibiotics , nebulizations and oxygen supplementation .

DISCUSSION :

- Tuberculous infections are serious and life- threatening complications in patients with malignant haematological disorders.
- It predominantly affects males with chronic myeloproliferative disorders, myelodysplasia, and AML.

patients with AML rather than other types of hematologic malignancies had a higher rate of tuberculous infections due to Mycobacterium tuberculosis .

-It can precede or occur simultaneously or during treatment of hematological malignancies

-The initial presentation in our patient was that of an infectious etiology.

-Tuberculosis was strongly considered in the differential diagnosis in view of his ethnicity

-Most patients with haematological malignancies and pulmonary tuberculosis showed mediastinal lymphadenopathy, pleural effusions, and fibrocalcified lesions

Some studies have reported AML to be more prone to tuberculosis infection in comparison to other hematological malignancies, such as acute lymphoblastic leukemia and lymphoma.

It can precede, occur simultaneously or even during treatment of hematological malignancies.

In the study by Jain et al., the median interval between tuberculosis and AML diagnosis was about 13 weeks

Among these, 57.1% patients developed tuberculosis during the induction chemotherapy.

Prolonged fever is one of the key presentations of tuberculosis among patients with hematological malignancy.

Therefore, the possibility of tuberculosis infection in patients with persistent fever during chemotherapy should be considered.

CONCLUSION :

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