MILIARY MOTTLING -- RARE CAUSE

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KANCHI KAMAKOTI CHILDS TRUST HOSPITAL
* 3 yrs old female child
* Intermittent fever of six months duration
* Respiratory symptoms like recurrent cough, fever and wheeze.
* Suspected history of contact with tuberculosis
* Preliminary work up for tuberculosis were negative (erythrocyte sedimentation rate, Mantoux test, Chest X ray, gastric juice for Acid Fast Bacilli)

* Started on preventers for recurrent wheeze
1 year later

Fever and respiratory symptoms like cough and wheezing
splenohepatomegaly (liver 3 cms below right costal margin, spleen 5 cms below left costal margin)
RS: bilateral diffuse crepitations

Chest x ray
Diffuse Miliary Infiltrates
* Re work up:
  • Neutrophilic leucocytosis/ AEC: normal
  • Normal immunoglobulin levels
  • HIV: negative

* Treated with antibiotics
* Planned for bronchoscopy / lung biopsy

* Started on ATT
6 months later

Recurrent cough, fever and progressive respiratory distress
Crepitations and splenohepatomegaly

- Neutrophilic leucocytosis (40400 cells/cumm)
- C-Reactive Protein: raised / ESR: raised
- Chest radiograph: bilateral pulmonary infiltrates worsening than before
* High Resolution chest CT --- bilateral diffuse pulmonary
* Broncho alveolar lavage fluid analysis for tuberculosis/other infections -- negative
* Bone marrow aspiration - normal
Thoracoscopic lung biopsy

Non Hodgkins Lymphoma -- Diffuse large B cell lymphoma
Risk stratified - Group B NHL

Chemotherapy - COP reduction

Repeat chest X ray...
Repeat chest X-ray: clearance of the pulmonary infiltrates
Follow up:

* Completed 9 cycles of chemotherapy
* PET scan negative at end of treatment
* Doing well
**Discussion**

* Miliary lung mottling is a radiological finding.
* The term miliary describes the radiographic picture of diffuse, discrete nodular shadows about the size of a millet seed.

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<thead>
<tr>
<th>Most common</th>
<th>Less frequent</th>
<th>Rare</th>
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<tbody>
<tr>
<td>Miliary Tuberculosis</td>
<td>Tropical pulmonary eosinophilia</td>
<td>Metastases Histiocytosis</td>
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<td>Fungal infections</td>
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<td>Varicella pneumonia</td>
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<td>Sarcoidosis</td>
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<td>Toxoplasmosis, syphilis</td>
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Chest X ray and Miliary TB

* Localizes the site of pathology
* Relevant clinical setting + radiological lesions ( miliary, hilar/paratracheal lymphadenopathy / fibrocaseous cavitatory lesions ) ---- may strongly suggest TB
Clinical presentations of Childhood Non Hodgkins Lymphoma

Precursor lymphoid neoplasms

T-lymphoblastic lymphoma --- Anterior mediastinal mass

B-lymphoblastic lymphoma --- Cutaneous masses, isolated lymph node masses, primary bone lymphoma

Mature B-cell neoplasms

Burkitt lymphoma --- Abdominal masses, GIT Waldeyer's ring

Diffuse large B-cell lymphoma --- Nodes, abdominal masses, bone

Mature T-cell neoplasms

Anaplastic large cell lymphoma --- Skin, nodes, bone

Peripheral T-cell lymphoma
Miliary infiltrates in Non-Hodgkin's lymphoma are extremely rare.

Primary pulmonary Non Hodgkins lymphoma is very rare and accounts 0.4% of all lymphomas.

Involvement of the lung with the lymphomatous process occurs in 5-20% of patients at diagnosis and eventually in 20-60%.
Review of literature


Pediatrician’s Perspective

Miliary TB is the most common cause for miliary mottling in a developing country, but not the only cause, especially when there is no bacteriological evidence of tuberculosis or if there is no expected response.

The importance of obtaining tissue diagnosis rather than empirical ATT and missing occult malignancies needs to be emphasized.

Pediatric Oncologist’s Perspective

Non Hodgkins lymphoma presents commonly as tumors in abdomen.

Though Diffuse large B cell lymphoma occurs only in 10% cases of primary pulmonary NHL, rare possibility of B Type NHL should be considered.
THANK YOU