TEACHING FILE

Grand Rounds

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CHRONIC JOINT SWELLINGS

Clinical Problem: A 3½ years old boy presented with fever and cough 3½ months back following which cough subsided with treatment. After 15 days of onset of fever he developed pain and swelling in left knee joint which then involved the other knee in 2 days. He was treated with penicillin for the same. In view of persistent fever and bilateral knee joint pains, a TB IgM was done which was positive and he was started on 3 drug antituberculous therapy (ATT). Subsequently, bilateral wrist joint swelling developed 2 months back. He was also given a blood transfusion 2 months back. There is no bleeding from any site and no history of TB contact. On examination, he was pale, had insignificant bilateral cervical lymphadenopathy. There was restriction of movement at temporomandibular (TM) joint, bilateral knees and wrist. There was no swelling seen in the joints. Systemic examination was normal. His investigations showed:

- Hemoglobin = 8.8 gm/dl (MCV = 71.9/fl, MCH = 22.9 pg)
- WBC count = 20,800/cumm (polymorphs = 70 percent, lymphocytes = 28 percent, eosinophils = 2 percent)
- Platelet count = 7,55,000/cumm
- ESR = 80 mm at end of 1 hour
- HIV Tridot = Negative
- ASLO = Positive (400 IU/ml)
- Echocardiography = Mild LV dilatation
- LDH = 900 IU/L
- Uric Acid = 6.6 mg%
- SGOT, SGPT, Total proteins – Normal
- Eye examination – No iridocyclitis
- Blood culture – Negative
- Widal, Weil Felix test, Brucella – Negative
- X-Ray knees – Normal
- RA Factor – Negative
- ANA, ds DNA – Negative
- HbsAg- Negative

How to manage this case?

Expert Opinion : Since this child has fever since 3½ months and has joint swellings, one would consider the following possibilities:-

- Infection such as HIV, Hepatitis B, Parvovirus, Brucellosis
- Autoimmune infection
- Malignancy
- Rheumatic fever

Tuberculosis does not lead to polyarthropathy. This child has a polyarthropathy going on for more than a couple of months. Infections such as HIV, Hepatitis B have been ruled out already. Parvovirus leads to slapped cheek appearance with arthropathy (fifth's disease) and persistence in immunocompromised patients. Aplastic anemia is also seen (more of red cell aplasia). However this child is not immunocompromised. Brucellosis may present with fever, hepatosplenomegaly but blood culture would be positive (Blood culture should be incubated for 28 days for brucellosis). Also in this child, Brucella ELISA is negative. Thus infection as a cause of his problems is unlikely.

Malignancy is a possibility but this child has thrombocytosis. (In malignancy one may expect thrombocytopenia) and the child has no organomegaly. Thus malignancy also seems unlikely. Rheumatic fever can lead to fever and joint pains but fever is not present for 3 months as is seen in this child. Thus even inspite of a positive ASLO titre, rheumatic fever does not seem to be the cause of his problems.

Autoimmune disorders present with thrombocytosis, elevated ESR. Also fever may be seen with systematic onset JIA. Thus in this child, systemic onset JIA seems to be the diagnosis with joint pains going on for more than 6 weeks. The child should receive DMARD and steroids (for the acute phase).

This child was started on Methotrexate and oral Prednisolone with NSAIDS. He responded to the same and is now on methotrexate as continuation phase.

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A 2 MONTH OLD WITH COUGH SINCE BIRTH

Clinical Problem : A 2 month old boy born of non consanguineous marriage presented with cough since birth, fever and breathlessness for 4 days. There is no refusal of feeds, difficulty in feeding. There is no stridor.

What is the cause of cough?

Expert Opinion : This child has presented with cough since birth. Usually cough is not a feature in neonates. Even with a respiratory pathology such as congenital lung problems, tracheomalacia; the patients usually present with breathlessness. Cough would suggest increased pulmonary congestion. Pulmonary congestion could be due to pneumonia in which case there would be fever and progression of disease in the 2 months. Pulmonary congestion could also be due to fluid which may occur with a heart disease. Heart disease which leads to pulmonary congestion could be a congenital heart disease with left to right shunt. The present fever and breathlessness could be due to pneumonia. In this child, on examination, there was a perasternal pansystolic murmur with cardiac failure and echocardiography showed moderate size ventricular septal defect (VSD) with pulmonary hypertension and Chest X-Ray showed a right upper zone pneumonia.

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