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Haematology and Haemato-Oncology Newsletter

I thank you for all your wishes and words of wisdom for this newsletter. Haemato-Oncology is fascinating and I am fortunate to have a team of in house doctors and all my colleagues in community who provide me with the clinical material in last 3 years of my practice.

In this newsletter we will discuss 3 cases with the same diagnosis.

Case 1 (referred by Dr Shailesh Shah, senior physician):

17 year old medical student was referred for pancytopenia and bleeding gums. No fever. No seizures or vomiting No lymphadenopathy or splenomegaly. Hb: 6.2, wbc: 2,300 and platelets: 11,000. LFT and creat: N. PT and APTT raised.

Case 2 (referred by Dr Manoj Chitale, senior physician):

48 year old housewife was referred for anaemia and thrombocytopenia. Ecchymotic patches all over. No obvious bleeding. Fever for 5 days. No hepatosplenomegaly. Hb: 7.3, wbc: 18,400, platelets: 15,000. She was treated at her home town for fever for 10 days. PT and APTT was raised.

Case 3 (referred by Dr Ramakant Patil, senior paediatrician)

2 year old male child was referred for pancytopenia and bleeding. Ecchymotic patches all over. No fever. No seizures. No hepatosplenomegaly. Hb: 5.4, wbc: 3,200 and platelets: 23,000. PT and APTT were raised significantly.

Diagnosis?

In all cases, a very specific diagnosis of Acute Promyelocytic leukemia (AML-M3) was made. If the peripheral blood smear (PBS)is looked at carefully, it cannot be missed by a trained person. We can see classical abnormal promyelocytes (normally present in the bone marrow) on PBS.

There is a specific chromosomal abnormality t(15,17) in all cases.

Why bleeding?

Bleeding is not due to thrombocytopenia alone, but due to Disseminated Intravascular Coagulation (DIC) which is

caused by the granules released from the abnormal promyelocytes. They have intracerebral bleed. 20% patients will present with thrombosis, classically as cerebral venous thrombosis and may present with seizures.

Management :

Urgent : there is significant bleeding risk if not diagnosed early and hence they need FFP, Cryoprecipitate and platelet transfusion to tide over the early crises.

Chemotherapy?

Until 12-15 years ago this was a fatal disease, but now we have got agents which helps the abnormal promyelocytes mature into neutrophils and hence the chances of bleeding are lowered.

1. Inj. Arsenic trioxide was used in 2 cases (cheaper therapy) for prolonged period (3-4 months) along with anthracyclines.
2. In case 1, I used Tab. ATRA (all trans retinoic acid- Vitamin A derivative) along with Inj Idarubicin (anthracycline).

Outcome and prognosis?

All 3 patients are doing well and in remission.

The outcome if treated early is almost 90% complete cure!!

What is so special about these three cases?

1. Can be fatal if not diagnosed early.
2. Can be easily diagnosed if PBS looked at carefully.
3. Cost of the therapy is much less lower and they donot need prolonged hospitalization, unlike other acute myeloid leukemia.
4. 90% of them will be cured!
5. Can be misdiagnosed as dengue or other viral fever and precious time may be lost.
6. It needs urgent therapy once diagnosed.

Laboratory news :

1. We have installed Beckman -Coulter chemiluminescence advanced machine for hormone assays, ferritin, Vit B12 etc.
2. We have started doing Paroxysmal Nocturnal Haemoglobinuria analysis in Nashik by Diamed Gel technique.
3. We have started screening test for celiac disease (common with long term iron deficiency anaemia).
4. In 2 months we will install " Platelet aggregometer" a machine to study platelet function in bleeding disorders and is also useful to see for antiplatelet therapy (i.e aspirin and clopidrogel) resistance before drug eluting coronary stents are placed.

I wish you on behalf of our LOTUS family " Ganpati Bappa Moraya"

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