Now Thalassaemia Can be Cured in NASHIK

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Haematology and Oncology Newsletter

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We are entering our fifth year of newsletter publication and I thank you for patronising this newsletter. The main purpose of this newsletter is knowledge dissemination and creating curiosity and awareness, which I think is fundamental for any practicing doctor.

I only have 1 case for you with a strong take home message.

Case 1:

55 yr old female underwent abdominal hysterectomy for menorrhagia. She had fibroids. Her CBC pre op was normal albeit mild anaemia (Hb: 9.9). Surgery was uneventful. She received routine antibiotics and 1 unit whole blood. She was discharged on Day 5.

She complained of fever and diarrhoea 48 hrs post discharge. She was transferred to another hospital and there she also developed macula-papular rash all over. Her CBC read Hb: 7.6, wbc: 3400 and platelets 98,000. She was transferred to Nashik and was in ICU.

Day 3: Hb: 6.6 wbc: 1200 and plts: 48,000. She had fever, rash, which was erythrodermic. Diarrhoea persisted. She also developed breathlessness and hence was put on BIPAP support. Broad spectrum antibiotics started.

4: Hb: 4.8, wbc: 700 and Plts: 18,000. on ventilator. Bone Marrow was done and reported as aparticulate (haemodilute) by pathologist. Trephine biopsy report was awaited.

Day 5: I was called in for an opinion in view of pancytopenia. Patient was intubated . Erythrodermic rash was extensive. Steroids were given.

Day 6: Patient died.
Diagnosis?? DD: 1. Post viral multiorgan failure.
2. Severe sepsis with multiorgan failure.
This patient had an acute illness which lead to catastrophic end.
On detailed history, **she had been given blood from her son!** The son was born out of a consanguineous marriage.
Bone marrow trephine showed hypo plastic marrow.

Final Diagnosis: Transfusion Associated Graft Vs Host Disease (Ta-GvHD)

What is Ta-GvHD?

This is an immune phenomenon which occurs after blood transfusion when the host is either immunocompromised or immunocompetent.

a. *Immunocompromised host(recipient)* : When whole blood is given, due to reduced immunity in recipient, the donor lymphocytes are not eradicated and hence they mount an

immunological attack against the recipient cells. This leads to skin, liver, gastrointestinal and bone marrow failure.

b. *In immunocompetent host (recipient):* As was the case of our patient in discussion, the donor lymphocyte were not recognised as "foreign" as they shared one HLA haplotype (as it was a blood donation from the patient's son) (Each individual has fixed haplotypes on lymphocytes and they are inherited from parents), but reverse was not true as the Donor Lymphocytes had only one HLA haplotype in common the other haplotype recognised the recipient cells as "foreign" and mounted an immunological attack leading to Ta-GvHD.

I know it is confusing! and not easy to explain in the current format. You can contact me for further clarification.

Ta-GvHD is universally fatal disease!!

How to prevent it?

1. **Strictly avoid blood transfusion from close family members**. This is very important as many patient 's ask for close relatives blood being given. This practice has to stop.....
2. When we treat haematological malignancies, we always irradiate all the blood products, so that all the leucocytes in the product are eradicated and hence Ta-GvHD is avoided.
3. When we do bone marrow transplant, all the blood products are universally irradiated.
4. If you use leucocytes filter, one can achieve maximum reduction and prevent Ta-GvHD, but irradiation is gold standard.
5. Prefer packed cell transfusion (PCV) as opposed to whole blood, as whole blood is likely to have more leucocytes.
6. **Do not give blood unnecessarily. Did our patient really need that 1 unit of blood?** What does 1 unit of blood do to a patient??

Since blood banks are mushrooming all over it has become easy to transfuse blood and blood products. Please use blood only when needed. For commercial reasons sometimes blood is given to an anaemic patient! Please avoid this practice unless absolutely necessary. Routine use of blood products during surgery is also criticised as we need to look into the physiology of red cells in the patient and ask a question? **Does he/she really need blood?**

Lotus Diagnostics news:

We have started a new collection centre at Trimurti chowk, Cidco, near Atul Sweets under our **"Junagade Health Foundation". All patients going to the collection centre will get 20% discount** on all in house tests. This year round offer and not a marketing gimmick!! Blood tests like all other commodities are expensive for some section of our population and hence we have started this unique blood collection centre. We plan to start many such collection centres all over Nashik district. This is a small gesture to give something back to our society.

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