Help Thalassemia Child get Blood - Their Lifeline

Project

Aarohi Blood Bank has undertaken to provide 200 blood transfusions per month free of charge to the children affected by Thalassemia, for a year, and helping them in their fight for life against this dreadful and painful disease.

Thalassemia and its treatment

Thalassemia is a genetic blood disorder where there is progressive anemia due to abnormal Haemoglobin formation. Once a child is diagnosed to have thalassemia, the child has to take lifelong treatment. The treatment includes regular frequent red cell transfusions with chelation therapy for iron overload. The optimal treatment comes at a prohibitive cost and is out of reach for majority of children.

Besides bearing the cost of treatment, the psychological stress to both the patient and the parents/family is phenomenal.

In India, about 80 to 90 % of the babies born with Thalassemia die within a few years of birth.

A child with Thalassemia develops anaemia. Detection and proper treatment of this anaemia is very important for the life of the child. Treatment of Thalassemia is either Bone marrow transplantation (which is very difficult procedure) or with regular Blood Transfusion. A child with Thalassemia requires blood every 15 to 20 days for his/her survival. This perennial requirement is very difficult for the poorer section of the society and they need support.

Aarohi caters to the perennial segment - Thalassemia children, providing blood free of charge. It has been operating on this very emotion since 2009 at Hyderabad, India, with the active support of donors and volunteers. Blood is sourced by having camps at Corporate offices, Institutes, Community Centres etc.

This helps these children get Blood - their Life line.

Our six year journey in the city of Hyderabad started from a modest beginning of 1300 donors in the first year. We have now crossed the 25000 donors mark, cumulatively. The result – Today Aarohi supports 2000 children diagnosed with Thalassemia and 4000 diagnosed with Leukemia annually.



Role of Aarohi Blood Bank

Aarohi is borne out of a review (and is in response) of the Indian public health situation, which pointed to serious blood shortages - further seriously aggravated by the lack of appropriate infrastructure for enabling 'safe blood transfusions'. Safe transfusions are a necessity in major operational procedures, trauma induced surgeries, cancer related procedures, pregnancy complications and other disorders / deficiencies that require periodic blood transfusions.

Being a country with a population of over 1.3 billion, India faces serious challenge in meeting blood requirements. Statistics show that in India there are 234 million major surgeries, 63 million trauma related surgeries, 31 million cancer related procedures and 10 million pregnancy related complication, which require safe blood transfusions. Majority of the pregnancy related and trauma cases require huge amount of blood and blood products within a short time and, therefore, proximity and immediate availability become critical.

In addition to these requirements (which are possibly one off), there is a category where need is perennial. Conditions like Thalassemia, Leukemia and similar such hematological diseases have longer duration and continued requirement.

- While the first category has 'healthcare' support in terms of the medical delivery system addressing it, starting from hospitals recognising need and equipping itself, the second category is more 'medicare' in nature and need, and therefore, has no institutional support. The 'carrier of the disease' has to fend for himself or herself, on an individual basis.
- Secondly, the first category is financially supported. The hospitals charge for all services, including blood. And the patient is able to pay for it either based on their own financial capability or through an insurance supported mechanism. However, the second category has no such system and possibly, not possible to have it in place.
- Thirdly, the carriers of the 'perennial' segment are, invariably, from the poorer section of the society, as they contract these conditions due to ignorance and / or sheer inability to apply mind on such issues.

These 'carriers' are generally clueless on where to go for accessing their need namely, Blood and they cannot afford - even this small value.

At a time when society is progressing and encouraging patients towards 'paying' for health services, the 'perennial' segment gets to be more and more ignored. Therefore, one is moving more to an 'organised' category while the other remains 'unorganised' and 'disorganised'.

One must record the fact within the 'organised category' also, there are quite a large number of patients unable to afford the high value charged, even for blood supply, by the respective hospitals.

Statistics show that there is a need for 1.2 crore units of blood annually (in India) and against this, there is a shortfall of about 11.5%. Without hesitation, one can conclude that a good part of the shortfall 'sufferers' are in the perennial segment requiring blood and blood components regularly. Further, how much of the need of the perennial is authentically captured in the overall reporting is anybody's guess - *these 'carriers' are not easily visible.*

Blood Properly Processed?

Where there is 'shortage', there is likelihood of 'inadequately' processed or screened blood, servicing the need.

Every unit of donated blood should be screened for HIV (Human Immunodeficiency virus), HBV (hepatitis B virus), HCV (hepatitis C virus), malaria, filaria and other blood transmitted diseases (VDRL) prior to being made available for transfusion. Therefore, scientifically equipped facility with quality control procedures and with standard operating procedures should be in place.

While every corporate hospital typically develops its own blood bank infrastructure to cater to the affordable categories, the position of government hospitals as well as other large segments of population with monetary affordability challenges is worrisome, with many of them often ending up in denial or sub-standard healthcare access.

Aarohi plays the pivotal role by connecting such needy with the large community of big hearted Voluntary Donors and ensures that these needy get access to safe blood / blood components.

Aarohi has now been functional for more than 6 years with active support of Voluntary Blood Donors and volunteers in Hyderabad and the surrounding districts.

Aarohi Blood Bank, registered with Government, operates on a unique 'not for profit' model of providing state of art collection and issuance facilities and is run by a highly qualified and committed team led by Dr Aditi Kishore.

It is committed to provide Blood Components free of charge to Thalassemic children and children with Leukemia. Untreated Thalassemia can even lead to death in the First Decade of Life! A child with Thalassemia needs a Blood Transfusion every 3 to 4 weeks throughout its life to survive. Regular Blood Transfusions are one of the key Supportive treatments required for survival of the child.

The blood collected is processed into components, screened to rule out the communicable infections and then stored at the required and specific temperature.

In order to increase the coverage of servicing more number of Thalassemia children, the lab need to equip with Refrigertaor Centrifuge, Plasma Freezer, Hemoglobin Estimator and Equipment for Screening the Blood for Transfusion Transmitted Diseases like HIV, Hepatitis B and C, Malaria etc.

As the Blood is sourced at blood donation camps with large numbers at a time, the processing equipment increases the efficiency of component separation in a time bound manner. The Centrifuge therefore supports the operational requirement. The plasma freezer enables additional storage capacity.

Until date Aarohi has handled over 27000 collections and approx. 46,000 issuances of blood and blood components to various beneficiaries of these.



Aarohi has active support from Blood Donors from various segments: Corporates like GE, Genpact, Dell, Bank of America, ADP, HSBC to name a few; Higher Education Institutions -Vardhaman College, BVRIT, Sree Datta, Sridevi Dental College, Malla Reddy College and many more; International Organisations like Rotary, Lions and Round Table.

Aarohi has been organising special Camps where Blood is collected and reserved for exclusive supply to Thalassemia children only. Blood Donation Drives has received immense response, especially in the Corporate Donor segment, where commitment for specific periodic camps get hosted and the Donors relate themselves to the enduser (as a good cause).

BUDGET

Target Blood Transfusions (BT) in a month	200
No. of months in a year	12
Target Blood Transfusions in a year	2400
Margin of Safety	1.20
Total Blood Transfusions in a year	2880

S.No.	Particulars	Unit Cost	Units	Amount in INR (₹)	Amount in USD*
1	Blood Bag Kit	₹ 250 per BT	2880 BT	7,20,000	10,588
2	Consultation & Testing	₹ 30 per BT	2880 BT	86,400	1,271
3	Consumables	₹ 20 per BT	2880 BT	57,600	847
4	Technicians & Med Officer			13,70,000	20,147
a.	- Medical Officer	1 Nos.	₹ 450,000 p.a	4,50,000	6,618
b.	- Technical & Support Staff	4 Nos.	₹ 230,000 p.a.	9,20,000	13,529
5	Camp Expenses	₹ 8000 per Camp	12 Camps p.a.	96,000	1,412
6	Electricity & Storage	₹ 25000 per month	12 Months p.a.	3,00,000	4,412
7	Maintenance	₹ 5000 per month	12 Months p.a	60,000	882
8	Biohazard Disposal	₹ 1000 per month	12 Months p.a	12,000	176
	Total			27,02,000	39,735
	* 1 USD = ₹ 68.00				

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