

BLOOD LINE

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Plateletpheresis from voluntary donors : Experience from a tertiary cancer care centre

Transfusion support in cancer patients is vital for their survival. Platelets, in particular, are necessary to prevent serious bleeding. In hematologic malignancy, patients are dependent on platelet transfusions to sustain life. Apheresis especially plateletpheresis has a crucial role in the transfusion support of patients suffering from hematologic malignancy.

What is apheresis?

Derived from the greek word 'Aphaios' – which means to take from Plateletpheresis is done to obtain platelets from voluntary blood donors.

The platelet product thus collected is equivalent to six random donor platelet units, thereby providing a more potent product with fewer donor exposures. With newer technology and more efficient process, higher yields of platelets may be obtained from one single donor.



Criteria to be an apheresis donor:

- Donating platelets is slightly different from a whole blood donation.
- The donor should have donated blood at least once before platelet donation.
- Age : 18 to 60 years, with minimum weight of 60 kg (preferable)
- All criteria required for whole blood donation must be met

How frequently can a plateletpheresis donor donate?

- Plateletpheresis donors can donate more frequently than whole blood donors
- Interval between donations should be at least 2 days
- Should not undergo plateletpheresis more than twice in a week or 24 times in 1 year, If donor's red cells are not returned, then the subsequent procedure is to be done after 8 weeks only.

Benefits of Apheresis platelets/Single donor platelets:

The main advantage of single donor platelet is an adult therapeutic dose of platelets is obtained from a single donor which limits the risk of transfusion transmitted infections and alloimmunization to HLA antigens. Transfusing apheresis platelets is seen to be associated with a significant higher Corrected Count Increment than whole blood derived platelets.

Some challenges faced:

- Donor recruitment for plateletpheresis on a daily basis is a challenging task. Even a pool of regular apheresis donors is insufficient to meet the rising requirement of apheresis platelets

The following observations were made while counselling and motivating whole blood donors to undergo plateletpheresis:

- Majority of donors who came to donate whole blood were totally unaware about apheresis procedure and single donor platelets.
- There exist certain myths regarding the safety of apheresis, which act as demotivating factors for donors.
- Many donors were not willing to undergo plateletpheresis as the procedure was time consuming (takes upto 90 minutes)
- Few donors opposed the principle of blood being returned back to the donor as they were apprehensive of getting infections.

Role of voluntary blood donors and organisations in plateletpheresis:

Need for blood and blood products are growing day by day as a result of advancement in clinical medicine. Recruiting and retention of new blood donors should be one of the main missions of a blood centre. Donor education, motivational activities and communication is the key to donor retention and this should be directed towards platelet donation also. Advantages of platelet donation over whole blood donation should be emphasized. Regular voluntary donors should be made aware that there is no or minimal blood loss in plateletpheresis and they are fit to donate whole blood after a month. Newer technology ensures that post donation platelet count of the donor is kept well within normal limits, thus adding to donor safety. On the patient side, it should also be emphasized that plateletpheresis reduces multiple donor exposures to the patient yields a superior quality product.



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Chetan Makam, Managing Director, Terumo Penpol's wrote an Opinion piece in The Hindu Newspaper

NEWSPAPER

The blood management system needs a fresh infusion

Prioritising access to blood and its products remains fundamental to building a resilient global health architecture

The COVID-19 pandemic magnified the inequities in public health across the globe. Learning from experiences, policymakers across the world have rightly endorsed the need to improve the global health architecture as a tool to catalyse economic growth and secure the future of the planet. Greater health financing through international collaborations, deepening the adoption of digital health solutions, and increasing access to medical countermeasures are some of the aspects that are key to reducing the global disparity in health and strengthening the global health architecture. However, amidst these crucial strategies, prioritising access to blood and its products remains fundamental to building a resilient global health architecture.

Blood and its various products play a crucial role in a number of medical scenarios, which includes scheduled surgeries, emergency procedures, as well as in the treatment of conditions such as cancer, thalassemia, and postpartum haemorrhage (PPH). This underscores their irreplaceable significance in upholding patient health across a spectrum of health-care needs.

The issue of blood shortage

A recent report by the World Health Organization (WHO) has brought attention to the global disparities in blood collection. For example, despite having 14% of the global population, countries in the WHO African region could only collect 5% of the global donations. Comparable patterns emerged in low-income and lower-middle-income nations, where these countries received 2% and 24% of the worldwide contributions, respectively, even though their populations account for only 8% and 40% of the global population, respectively.

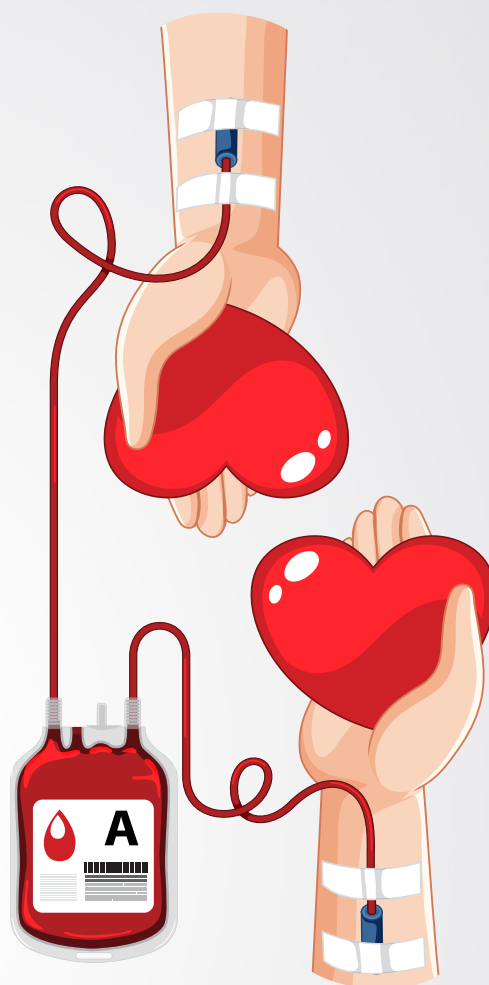
Similarly, while India has improved its blood management ecosystem, the country still faces a perennial shortage of blood units, impacting critical health-care services. Calibrating according to WHO's standards for self-sufficiency, India collected around 1.27 crore blood units and faced a shortage of over six lakh units in 2019-20. Such shortages can have serious implications on the functioning of the health-care system and if addressed promptly, can significantly contribute to saving lives. For example, according to a study by Savitribai Phule Pune University, an automobile accident victim needs up to 50 units of blood. In 2019-20, the shortage was significant enough to put approximately 12,000 accident victims' lives at risk. Moreover, this deficit could impact 1,00,000 heart surgeries and approximately 30,000 bone marrow transplants.

Advantages of a hub and spoke model

Inequities in access to safe and sustainable blood can be mitigated through the establishment of robust public-private partnerships (PPP). Collaborations between leading industry players hold immense potential in introducing innovative models for blood collection and distribution, effectively addressing numerous existing challenges. The hub and spoke model is one such innovative method where high-volume blood banks act as a hub for smaller blood centres. This model can be particularly relevant for resource-constrained settings in Low- and Middle-Income Countries (LMIC) as it can address critical gaps in blood availability and distribution, thereby enhancing the accessibility and availability of blood and its products.

Further, as the shelf life of blood and its products is short, a hub and spoke model would help in optimising their utilisation by the smaller blood centres. This innovative approach streamlines distribution, ensuring that these vital resources reach their maximum potential while reducing losses from expiration.

According to the data points tabled in Parliament, over the course of three years, from 2014-15 to 2016-17, a surplus of 30 lakh blood units and related products were discarded. The primary reasons were expiration from not being used, degradation during storage and the presence of infections such as human immunodeficiency virus (HIV) and syphilis. Moreover, the implementation of a hub and spoke model can also improve the accessibility to safe blood and its products in community health centres and smaller sub-district hospitals, especially in geographically challenging topographies.



Dispel the myths around blood donation

Another aspect of the blood management system that perpetuates the inequities associated with it is the propagation of myths and misinformation around voluntary blood donation. Many people still refrain from donating blood voluntarily because of the fear of infections, damaging their immunity, or simply because they assume it to be a time-consuming process. These misconceptions can be dispelled through targeted awareness initiatives.

While the government and its agencies have tried to improve awareness through regular campaigns, the private sector can work closely with the government to launch dedicated awareness campaigns aimed at the grassroots. Such campaigns can leverage the power of social media and deploy innovative tools such as multi-lingual comics to reiterate the need and benefits of regular and voluntary blood donation. These creative strategies can be effective in engaging diverse audiences and fostering a culture of informed and voluntary blood donation.

As we leave the COVID-19 pandemic behind us and align the global developmental road map for an equitable and sustainable future, the health paradigm must be prepared accordingly. Along with other modifications in the health paradigm, since blood and its products are central to modern medicine, political leaders and the policymakers must continue to take steps to strengthen the blood management ecosystem. Simultaneously, proactive engagement from industry and active participation of the citizenry should also be pivotal aspects of this concerted effort.

People in India not donating enough blood: Doctors

Experts at a conference in India have warned that the country is not donating enough blood to meet demand, with donations falling short of the 11 million units needed annually. Sri Lanka has achieved 100% voluntary blood donation, but India is lagging behind. People in India aren't donating enough blood to save lives, said experts at the two-day 48th Annual Conference of Indian Society of Blood Transfusion and Immunohaematology (ISBTI) that began at King George's Medical University (KGMU), Lucknow, on Wednesday.

"India needs about 11 million units of blood annually, but the donation hardly crosses the 9-million mark. Compared to other countries, Sri Lanka has achieved 100% voluntary blood donation six years earlier but in India, we are far behind the requirement," said Dr Sangeeta Pathak, general secretary, ISBTI.

"In Uttar Pradesh we need up to 10 lakh units of blood but the availability through voluntary blood donation is up to 7 lakh units annually," said Prof Tulika Chandra, HoD, transfusion medicine, KGMU.

"Recently, we conducted a major campaign for blood donation which was a success. But instead of a campaign, we need to make voluntary blood donation a routine act to ensure blood or blood components are available to all who need it. Recently we made available 46 blood component separator units in state," said principal secretary, medical education, Partha Sarthi Sen Sharma in his address.

Prof Rajeev Agrawal, HoD, plastic surgery, SGPGIMS, former head of clinical haematology Prof AK Tripathi, also shared their views during the programme.

In his address, chief secretary DS Mishra shared his personal experience regarding blood donation and stressed upon the need to give a push to voluntary blood donation.

"In certain medical conditions, where the doctor intimates in advance the need for blood, the family of the patient can donate blood and obtain donor cards to avoid delay in getting blood or blood components when needed. This can be done at any blood bank," said Dr Amita Shukla, senior gynaecologist, SC Trivedi Memorial Trust Hospital.

"The only way to ensure that no patient has to wait for blood or blood components, is to increase voluntary blood donation," said Dr Pathak.



Source: <https://www.hindustantimes.com/cities/lucknow-news/people-in-india-not-donating-enough-blood-doctors-101696426808180.html>

Blood is not for sale, says health regulator

Blood at hospitals or private banks and centres is "not for sale" but the institutions are allowed a "processing charge". All other fees are to be waived off too as processing charge covers them, India's health regulator has said. The move is seen as one that aims at clamping down on a very prevalent practice of over-charging across hospitals and private blood banks.

"It was opined that blood is not for sale, it is only for supply and only processing cost may be charged by the blood centre," the Central Drugs Standard Control Organisation (CDSCO) said in a notice, reviewed by businessline.

The health regulator said the decision was taken based on the 62nd meeting of the Drugs Consultative Committee held in September last year. It mentioned that the committee noted that there was "overcharging" for blood.

The General Practice

Hospitals and private blood banks across India are known to charge additionally for per unit of blood if there is no corresponding blood donation. The amount so charged is anywhere between ₹2,000 and ₹10,000 per unit. In case of rare blood types, charges are often higher. This is a general practice across the country. However, a patient pays processing charges irrespective of whether corresponding donations are made or not.

Processing charges, which are regulated, are around ₹250–1,550 for blood or components at private or non-government centres. For instance, while dispensing packets of whole blood and packed red blood cells the charges are ₹1,550; in case of fresh frozen plasma and platelets, the charges are ₹400; and cryoprecipitate ₹250.

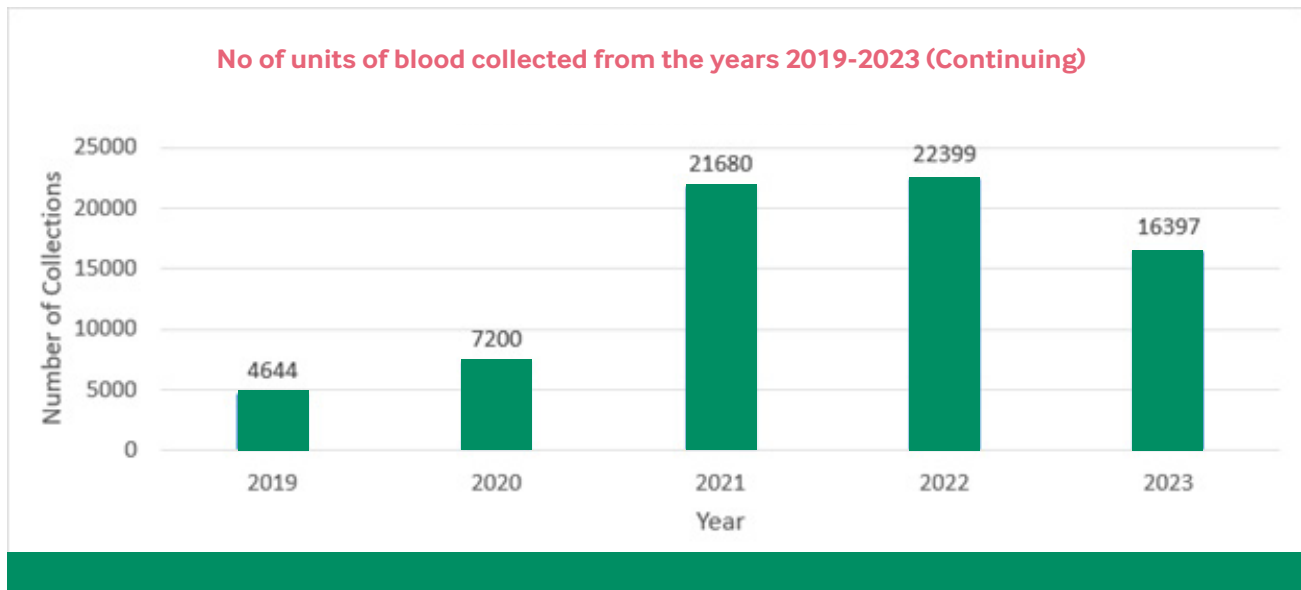
In government hospitals, these processing charges are lower and ranges between ₹200 and ₹1,100, across components such as white blood cells, red blood cells, frozen plasma and platelets.

There are also very specific processing charges on various blood tests. In a letter to various States, the CDSCO asked its regional branches to "direct all blood centres" under their jurisdiction "to adhere to the revised guidelines for 2022, for recovery of processing charges for blood and blood components."



Source: <https://www.thehindubusinessline.com/news/blood-is-not-for-sale-says-health-regulator/article67706420.ece>

Statistics on Blood Collections made by Penpol over the years through Blood Donation Camps



The spike in blood donation camps after 2020 occurred due to a policy shift by the organization. It decided to expand nationwide and ensure that all parts of the country receive our support, ensuring that the message on the need for voluntary blood donation reaches everywhere. Since then, there has been a consistent increase in the number of camps. We look forward to sustaining this trend even further by implementing a concrete plan going forward.

The activities pertaining to Voluntary Blood Donation includes -

- Transportation facility provided to the blood bank officials of blood banks, since at many places the blood camps had to be cancelled due to the lack of transportation fund.
- Motivating regular donors and institutions by felicitating them with Mementos and our token of gratitude (National Blood Donors Day and World Blood Donors Day)
- Awareness sessions at educational institutions and other places
- Support to the Meghalaya Blood Donation Awareness Project
- Token of Gratitude to Associates
- Organizing Activities with various stake holders to promote awareness on blood donation and other related diseases connected with blood donation.
- Awareness sessions during International Women's Day (March 7), World Health Day (April 7), World Blood Donor Day (June 14), National Blood Donor Day (October 1) and World Aids Day (December 1)
- Bloodline Journal that is circulated across the major blood banks in India.



Meghalaya Project to create awareness on Blood Donation - Blood camp organized on 24th November

In the year 2023, Terumo Blood and Cell Technologies, in collaboration with The Government of Meghalaya, announced the launch of a comprehensive behavioral change campaign aimed at increasing voluntary blood donation in Ri-Bhoi District, an Aspirational District in the State of Meghalaya. Chetan Makam, Managing Director Terumo Penpol along with the Health Minister of Meghalaya had inaugurated the campaign in June this year.

As part of this campaign, a blood camp was organized on 24th November at Meghalaya Police Academy Campus, Umran, Ri Bhoi District, which was the second of the three camps organized as part of the collaboration. 61 donors registered for blood donation, out of which 49 were eligible for donating blood and the remaining 12 were deferred. An awareness workshop was also carried out where a few of our videos on blood donation were showcased. The donors were requested to drop a missed call and one comic, and one pamphlet were shared with the 61 donors who had registered.

Furthermore, blood donation camp this time, saw a substantial increase in the people who donated blood from the first blood camp that was organized at kick-off in June 2023 where around 12 people donated blood.



ISTM Transmedcon Chandigarh , Nov 2-5, 2023

11th Annual National Conference of Indian Society of Transfusion Medicine - TRANSMEDCON 2023 was held at Chandigarh from 3rd – 5th November 2023. The conference was organized by the Department of Transfusion Medicine, Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh in collaboration with the Department of Transfusion Medicine, Government Medical College, and Hospital (GMCH), in the beautiful city of Chandigarh, India.

The conference can be termed as an imperative for Transfusion Medicine segment in India, as the range of advance topics and workshop session were significant in the advancement of the segment. The event was attended by approximately 700 plus participants mostly doctors of transfusion fraternity from all parts of country which gave us an important opportunity to collaborate & interact with customers while demonstrating our products with latest technology during the conference and the preconference workshop sessions.



Workshop on Instrumentation

Aditya Pandey, presented Trima & Reveos operational function during the instrumentation workshop. Which was followed by various Q&A.



Workshop on Spectra Optia demonstration & Hands On

Guruprasad GG, Regional Clinical Support Manager - South presented the Spectra Optia Procedures, Feature & Application while Vishwas & Jeewant assisted for the Hands On to the participants during the workshop session on Therapeutic apheresis.

Dr Rekha Hans , Assistant Professor- PGI Chandigarh presenting on Spectra Optia during the Workshop Session of Therapeutic Apheresis. The session was registered and attended by 60 participants. This session was followed by a Quiz in which top three winners were provided prize based on their rankings. This workshop session had the maximum registration & a very valuable insights related to the procedure types, procedure handling & troubleshooting were described & demonstrated in detail.

Dr .Tulika Chandra, HOD- KGMU, Lucknow presented on the topic Pathogen Inactivation - preliminary data from a tertiary care center. She shared her experience while presenting with data from her own center. The lecture from Dr. Tulika gathered huge attention from the audience and subsequent discussion were followed during the Q&A Session. Mirasol being presented on this platform demonstrates the acceptance to the advance technologies which is introduced by Terumo in India.



A dedicated and structured teamwork from all the participants during the event made it successful and memorable one!

AABB-AATM

The AABB-AATM International Conference was a resounding success with 470 delegates, including 216 international attendees and 18% industry partners. This diverse participation has strengthened our global connections and facilitated meaningful relationships with customers. The event served as a crucial platform for sharing technology and fostering collaborations between academia and industry. The active engagement of international delegates enriched discussions, while the presence of industry partners bridged the gap between theory and practical applications. The conference's triumph is attributed to the dedication of organizers, speakers, and participants, promising continued innovation and advancements in the field.



Having actively participated in an international conference, we draw motivation from the valuable insights gained. Our commitment to continuous improvement drives us to enhance our offerings for the betterment of both our customers and society. Through this experience, we are inspired to innovate and contribute to positive changes that positively impact our community. We had designed an Eye-catching exhibition booth showcasing our product features and benefits and organized a product-related quiz for our customers, offering a guaranteed prize for participation.

The team handed out brochures, flyers, and promotional materials highlighting our product's value proposition. Interactive multimedia presentations on screens captured attendees' interest. Our team was strategically divided: one group was stationed at the stall, another in the corridors and tea/coffee area, engaging with customers and guiding them to our booth. The third group was present in all lecture halls, monitoring competitive intelligence.

Dr. Rahul Katharia delivered an outstanding presentation on "Whole Blood Automation: The Way Forward" during the scientific sessions. His expertise and articulate handling of delegate queries showcased a deep understanding of the subject. The session not only highlighted Dr. Katharia's proficiency but also underscored the transformative potential of whole blood automation technology. Kudos to both the speaker and the cutting-edge technology for contributing significantly to advancing our field.



In an excellent scientific session, Dr. C. Shivaram, Consultant and Head of Transfusion Medicine at Manipal Hospital Bangalore, presented on "Therapeutic Plasmapheresis: Newer Modalities." His insightful presentation showcased the advancements in this critical field, with a special mention of the Optia technology. Dr. Shivaram's expertise, coupled with the innovative features of Optia, highlighted the promising future of therapeutic plasmapheresis.

Dr. Tulika Chandra, Consultant and Head of Transfusion Medicine at KGMU Lucknow, presented on "Blood Components Modifications." Her exemplary session highlighted the transformative insights in the field, particularly emphasizing the role of Optia and Reveos technologies. Dr. Chandra's expertise coupled with the innovative features of Optia and Reveos showcased their pivotal contribution to advancing blood component modifications.

On November 30, 2023, the Pre-conference Workshop on Stem Cell Harvest & Cryopreservation witnessed a remarkable turnout with 45 registrations from national and international delegates. The workshop proved to be excellent, with our clinical team showcasing the Spectra Optia in Stem cell collection. The demonstration received widespread appreciation from the delegates, and Dr. Sangeeta Pathak commended the event, acknowledging the cutting-edge technology employed. This success motivates us to continue our commitment to excellence and underscores the value of utilizing the best technology, like Spectra Optia, in advancing stem cell procedures. The positive feedback received reinforces our dedication to staying at the forefront of innovative and impactful medical technologies.

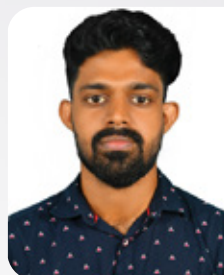


Act of Compassion

On January 3rd, a major surgery was scheduled for a medical emergency for one of our associate's family and three units of blood (O+ve) was required. The call for the blood was made in the morning and as soon as the information was passed, three of our associates volunteered to give blood for the patient.

We would like to extend our sincere gratitude to our associates who donated blood, they are -

- **Pranav S (PPC)**
- **Monsi Kurian (R & D)**
- **Nidhin Palliyalil (R & D)**



Monsi Kurian



Pranav S



Nidhin

Baby P S, supported by sharing the information and providing logistics to the donors as the hospital was at a far-off place. This emphasizes even more how actively we as a group not only advocate for voluntary blood donation but also actively participate in it. We are grateful to all our colleagues who are flag bearers of brotherhood.

Abhijith S (Global Complaint Handling) and Anand Rajeswari (Research and Development) for their blood donation to a cancer patient at Gokulam Hospital. The donation was done on 12th January. Tino Manimuthu (HR) was coordinating the blood requirement on behalf of the patient.

It should be mentioned that both Abhijith and Anand showed up voluntarily when the call was made.

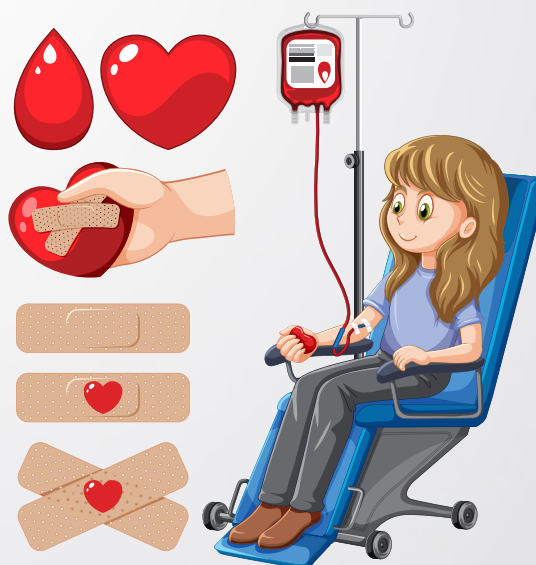


Abhijith S



Anand Rajeswari

45th platelet donation at RCC by Mithun, Trainee at Pharma Division of BBF.



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**DONATE BLOOD
SAVE LIVES!**



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