

ABSTRACT

Cord Blood Bank

SANGEETA R. LAD

A mother living in north London has unknowingly given a second life to a five-year old child with leukemia thousands of miles away in Australia. But, how was this possible?

Sometimes in the past, two years ago she agreed to donate blood from the placenta, immediately after the delivery of the baby to the London Cord Blood Bank.

Cord Blood is normally discarded along with the Placenta. However, it contains approximately the same proportion of stem cells as bone marrow. Cord blood is used as the source of haematopoietic stem cells.

ADVANTAGES

Cord blood has several advantages over bone marrow cells for transplant purposes.

To treat patients with :

- Lukemias
- A Plastic Anaemias
- Genetic Disorders
- Other bone marrow diseases
- Cancers

Cord blood stem cells have the potential to be used in the primary treatment of auto-immune disorders such as;

1. Rheumatoid arthritis
2. Diabetes
3. Inherited diseases such as Hemophilia and Haemoglobinopathies.

However Cord blood stem cells can be used in the future for gene therapy of congenital disease cases and for innovative treatment of AIDS i.e.

B.Y.L. Nair Hospital, Mumbai

Neonatal HIV infection.

Including the use of anti-sense genes ribozymes, RNA Decays, transdominant inhibitor mutant genes and intracellular diversion strategies.

Sarah Allen is a Nurse – Counsellor with the London Cord Blood Bank (LCBB). Two years ago she had set up the collection service from scratch and now takes care of the collection of cord blood at two hospitals Barnet General in north London (where she is based) and Northwick Park in Harrow Middle Sex. “When I joined there was just me and two scientists”, she says, “nothing had been established at all and we had no guide lines. It was a real challenge”

THE STAFF

The Cord Blood collectors are trained technicians and not nurses or midwives. They are taught how to collect the blood first by observing and then by carrying out procedure under supervision.

TECHNIQUE OF COLLECTION

The collection itself is not a highly technical job. The main thing is learning to handle the equipment with the given level of sterility that we need, says Mrs. Allen.

COLLECTION OF BLOOD

Blood is collected by inserting a needle into one of the blood vessels in the umbilical cord and let it drain out in a bag.

The average amount collected from one placenta is about 80 ml., it has to be processed within 12 hrs. Then the blood is separated into a centrifuge, the all important stem cells being sandwiched between plasma at the top of the test tube

and red blood cells at the bottom.

STORING OF BLOOD

The stem cells are stored at 180°C huge liquid nitrogen freezers and can be kept for as long as 10 years.

The process of collection and banking is very expensive.

CORD BLOOD BANKS

There are about 30 cord blood banks around the world, but London Cord Blood Bank, the first operational blood bank in U.K., is still a new developing project.

Oncologists and Haematologists from all over the world regularly search the LCCB registry for possible matches for their parents. But UK transplanters have so far proved cautious about using cord blood.

CORD BLOOD TRANSPLANTATION

The first cord blood transplantation was carried out in 1988 and since then numerous centres in different parts of the world have applied. Six to seven hundred cord blood transplants have now taken place worldwide, thus the confidence is gradually building up.

Approximately 500 cord blood transplantations have been performed upto present and about 2/3 of the patient's involved were treated successfully.

A first informal WHO expert consultation was organised in association with the international symposium on cord blood transplantation held in Indian Polis 9-10 March, 1997.

But, unlike bone marrow donation, donating cord blood is quite easy, painless and free from risk to the donor.

The cord blood transplantation will begin with children. The smaller the recipient the higher the dose available from the cord blood. So the best chance of success is with children, says Dr. Rukh Warwick, LCBB Medical Director.

RESEARCH

Research work is going on elsewhere into a process called 'EXPANSION' which aims to increase the number of cells so that in future adults could be treated in the same way.

REFERENCES

1. Cord Blood Bank, UK - Mother's blood only donated
Nursing Time 1998 94(33), Page 42-43
2. Cord Blood Bank - Cord Blood Banking, WHO News bulletin at the WHO 1988.
3. Cord Blood Transplantation: current and further issues Inott S. The Indian Journal of Paediatric 1998, 65 (2) Page No. 163 - 171

BRANCH AFFAIRS

"THE ROLE OF A NURSE IN EMERGENCY"

The short term programme on the 'Role of a Nurses in Emergencies' was conducted at Government college of Nursing, Fort, Bangalore, from 5th to 7th July 99 for staff Nurses working at Emergency units in Government hospitals. This programme was sponsored by Government of India, DGHS, New Delhi.

Course Description: This course was designed to provide an opportunity for staff nurses to function effectively in providing quality care during emergencies.

Course Objectives : 1) To enable staff nurses to identify their role in emergencies. 2) To practice selected basic skills. 3) To prepare the protocol suitable for their own settings.

The faculty of Government College of Nursing, experts from different multidisciplinary team, attended the programme. The programme was inaugurated by D.M.E. Dr. Shivarathna Savadi, Dr. Chikkamoga, Medical Superintendent of Victoria Hospital, Smt. Maheshwari Bai, Asst. Director for Nursing Education and Training and Dr. G. Kasthuri, Principal, Govt. College of Nursing. Dr. Shivarathna Savadi, Director of Medical Education, lighted the lamp.

The valedictory address was given by Dr. K. Reddamma, Addl. Professor, Department of Nursing, NIMHANS. Dr. G. Kasthuri, Principal, Govt. College of Nursing, Mrs. B.G. Kulkarni, Co-ordinator of the programme, presented the report of workshop. Mr. Pataliah, Co-ordinator delivered the vote of thanks.

GOUTHAM INSTITUTE OF HEALTH ADMINISTRATION, BANGALORE

ADMISSION NOTICE

DISTANCE EDUCATIONAL COURSES (CORRESPONDENCE)

A. P. G. DIPLOMA IN HOSPITAL ADMINISTRATION	PG. DHA
RECOGNISED BY: Indian Hospital Association, New Delhi, ELIGIBILITY: Any Degree, DURATION: One year	
B. P. G. DIPLOMA IN NURSING ADMINISTRATION	PG. DNA
RECOGNISED BY: Indian Hospital Association, New Delhi, ELIGIBILITY: Any Degree, DURATION: One year	
C. P. G. DIPLOMA IN PUBLIC HEALTH ADMINISTRATION	PG. DPHA
RECOGNISED BY: Indian Hospital Association, New Delhi, ELIGIBILITY: Any Degree / Diploma or Certificate in Basic Health Worker / Public Health Nursing / Public Health Visitor's Training Certificate, DURATION: One year	
D. P. G. DIPLOMA IN NUTRITION & DIETETICS	PG. DND
RECOGNISED BY: Indian Hospital Association, New Delhi, ELIGIBILITY: Any Degree, DURATION: One year	
E. P. C. DIPLOMA IN HOSPITAL ADMINISTRATION	PC. DHA
RECOGNISED BY: Indian Hospital Association, New Delhi, ELIGIBILITY: Any Diploma / +2 / 10TH, DURATION: One year	
F. P. C. DIPLOMA IN NURSING ADMINISTRATION	PC. DNA
RECOGNISED BY: Indian Hospital Association, New Delhi, ELIGIBILITY: Nursing Diploma / +2 / 10TH, DURATION: One year	
G. P. C. DIPLOMA IN PUBLIC HEALTH ADMINISTRATION	PC. DPHA
RECOGNISED BY: Indian Hospital Association, New Delhi, ELIGIBILITY: Nursing Diploma / +2 / 10TH, DURATION: One year	
Health Worker / Public Health Nursing / Public Health Visitor's Training Certificate, DURATION: One year	
H. P. C. DIPLOMA IN NUTRITION & DIETETICS	PC. DND
RECOGNISED BY: Indian Hospital Association, New Delhi, ELIGIBILITY: Nursing Diploma / +2 / 10TH, DURATION: One year	

ADMISSION STARTED, limited seats for each batch, individual attention, lesson's are sent at free of cost, guidance giving by well experienced and highly qualified staff, dissertation paper presentation facilities available, we are one of the South Indian leading Institution in Health Administration. Send D.D. in favour of GIMST Rs.200/- for Prospectus cum Application

CONTACT : REGISTRAR, No. 258, 5th Main, 2nd Cross, 1st Phase, Manjunathanagar, West of Chord Road, Rajajinagar, Bangalore - 560 010,
Phone : 080-330 3737 / 338 5300, FAX : (91) 080-320 3777, email : goutham@giasbg01.vsnl.net.in, Website : http://www.bangaloreonline.com/goutham