Challenges to Future Growth: The Transplant Center Perspective Latin America

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Curitiba - Brazil

CIBMTR 2013
Latin America

- Total population: 585 million (2010)
- Number of countries: 33
  - South America: 12
  - North America: 1
  - Central America: 20
- Population Growth
  - Annual = 1%
- Life expectancy at birth
  - 74 years
- Infant Mortality rate
  - per 1,000 live births: 17

www.worldbank.org
Time line for HSCT in Latin America

- Colombia: 1976, 1979
- Costa Rica, Cuba, and Uruguay: 1985
- Mexico: 1980
- Chile and Argentina: 1986, Venezuela: 1987
- Panama: 2000
- Dominican Republic: 2002
- Ecuador: 2006
- First cord blood transplant: Brazil 1993
- First URD registry: REDOMe Brazil 2000
- Public Cord Blood banks: BRASILCORD 2004
## Transplants in Latin America reported to the CIBMTR: 1981-2011

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Teams*</th>
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*Overall number of teams that contributed data with the CIBMTR over the period.

Courtesy Marcelo Pasquini
Transplants in Latin America reported to the CIBMTR: 1981-2011

- **Number of Transplants**
  - Argentina
  - Brazil
  - Mexico
  - Uruguay
  - Venezuela
  - Other

- **Types of Transplants**
  - Allogeneic
  - Autologous

- **Related vs. Unrelated**

- **Years and Categories**
  - 1990-91
  - 1992-93
  - 1994-95
  - 1996-97
  - 1998-99
  - 2000-01
  - 2002-03
  - 2004-05
  - 2006-07
  - 2008-09
  - 2010-11

- **Related Transplants**
  - Bone Marrow (BM)
  - Peripheral Blood (PB)
  - Cord Blood (CB)

- **Unrelated Transplants**

- **Diseases**
  - NHL
  - AML
  - CML
  - Multiple Myeloma
  - HD
  - Aplastic Anemia
  - ALL
  - MDS/MPD
  - Other Leuk
  - Non-Malignant Disease
  - Other Cancer

- **Courtesy Marcelo Pasquini**
<table>
<thead>
<tr>
<th>Country</th>
<th>Annual # HSCT</th>
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<th>Unrelated Transplants</th>
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<th>National Donor Registries</th>
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# Latin America – HSCT Centers Characteristics

## South America - 2012

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*Courtesy Dr Willem Bujan*
HSCT in Latin America: Initial Challenges

- Overcoming initial challenges – Institutional Support
- Training personnel
- Exploring different funding sources
- Development of HLA labs and Blood Banks to attend specific necessities of transplant units
- Developing Government Regulations for HSCT
- Accreditation requirements for HSCT Centers
- Updating regulations and payment for new procedures
What we have reached so far
Brazilian HSCT Program

- **69 HSCT centers** - 85% are public
  - 50% Allo + Auto (50% Unrelated)
  - 50% Autologous
- **380 beds**. 2000 transplants /year.
- **Brazilian Society of Blood and marrow Transplantation** (founded in 1996)
  - 17 Annual National Meetings: 900-1000 participants
  - Brazilian Guidelines for HSCT / Working groups

*Courtesy Dr Luis Fernando Bouzas*
What we have reached so far
The Donor Registry Perspective: REDOME

REDOME: National Bone Marrow Donor Registry

- 2000 to 2012: 12,000 to 3 millions
- 250,000 newly recruited volunteers donors /year

REREME: National Registry of Bone Marrow Transplant Recipients

- 2002 to 2012: 21 to 248 URD transplants
- Chances of finding a donor increased from 15% to 80%

Medulanet – nov/dec 2012
Challenges to Future Growth
The Donor Registry Perspective: Unrelated HSCT in Brazil

HSCT BM/PBSC: 2006 – July 2010
UCBT: 2006 – July 2010

Courtesy: Dr. Luis Fernando Bouzas
Federal University of Parana - Curitiba – Brazil
2316 transplants (1979 – 2012)

- 92% allogeneic

- Fanconi Anemia: 260 transplants
- Severe Aplastic Anemia: 500 transplants
- Wiskott-Aldrich Syndrome: 43 pts
Improving Research Collaborations to Move Forward
(partnership and collaborative studies in Latin America)

Fanconi Anemia: FHCRC (Seattle); St Jude Hospital (Memphis), Rockefeller University (New York); Oregon University; Amsterdam

Wiskott Aldrich and SCID: EBMT Working Party of IEM and PID

Eurocord: CBT in several malignant and non-malignant diseases

Mexico: Reduced Intensity Prep Regimens and Regenerative therapies

APL (AML M3) – International Consortium: American Society of Hematology

Autologous HSCT for patients with Diabetes mellitus type I

CIBMTR Working Committees: PID and IEM; Non Malignant Diseases, Pediatric Cancers, International Studies

C GVHD and the NIH criteria: Brazil-Seattle consortium as a platform for future collaboration in clinical trials

International Myeloma Foundation: Brazilian Multiple Myeloma: patients characteristics

EBMT: Validation of the prognostic score for HSCT in CML
Worth to consider

Considering the complexity of HSCT we may say that Latin America has been very successful:

- Number of procedures are increasing progressively.
- Highly specialized transplant techniques, i.e. cord blood, haplos and URD transplantation are being done in centers of excellence.
- New transplant centers being developed.
- Many collaborative studies across different institutions.
- National BMT Societies are being founded
- Growing cooperation between transplant centers despite large discrepancy across regions.
  - Training and twinning between Latin American centers: Active educational programs for physicians, nurses and other allied health professionals
Future Needs

• Expand the number of transplant beds to cover patient’s needs
• Reduce the cost of HSCT and implement quality control program
• Discuss appropriate reimbursement by government or third parties
• Establish pertinent regulations facing the context of each country
• Generate opportunities for young doctors for advanced training
• Reinforce interaction between Latin American countries:
  ❖ LABMT
  ❖ WBMT
  ❖ National Hematology or BMT Societies
Muchas gracias, Obrigada, Thank you