

CHAPTER 7

BONE AND TISSUE TRANSPLANTATION

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7.0 INTRODUCTION

Data on bone and tissue transplantation has been poor since the first publication in 2004. In the previous seven annual reports (2004-2010) only USM Tissue Bank constantly notified NTR on tissues being distributed. Notification by bone and tissue users has also significantly declined.

There was difficulty producing the annual report for 2011. Although there was improvement in documentation and reporting by tissue providers, NTR had not received any Bone and Tissue Transplant Notification Forms during the year.

It was not well documented what had happened to donated tissues. Donated tissue is a gift of enormous value which we have the obligation to treat with care and respect; BUT we have lost track of donated tissues and have been unable to identify where it had gone and how it was used.

Efforts have been made to improve documentation on the procurement of bone and tissue. The methodology to effectively enforce notification is still unclear. We hope to get maximum participation and commitment from health professionals who perform bone and tissue procurement, banking, distribution and transplantation.

7.1 TISSUE DONOR HOSPITALS AND TYPES OF DONATED TISSUES

Table 7.1.1, Table 7.1.2 and Table 7.1.3 present the hospitals where tissue donation took place, the types of donated tissues and the bank where the tissues were sent to for processing, storage and distribution.

There were 11 deceased bone donors and 1 skin donor in 2011. The procurement of tissues from deceased donors was mainly performed by the team from Bone Bank Hospital Kuala Lumpur (HKL) and University of Malaya Medical Centre (UMMC) Bone Bank. USM Tissue Bank was last involved in tissue procurement from one deceased donor in 2010 and in collection of procured tissue from one deceased donor in 2011.

There was a discrepancy between the number of tissue donors and the total number of donated tissues. The record of the type and number of tissues being procured could not be traced. This was due to lack of awareness of the need for documentation and incomplete recording by health staff involved in procurement activities and tissue/bone bankers.

In many cases only the femur and tibia were procured from deceased donors. The reason for this practice remains unexplained. The previous reports showed that other tissues were utilised for transplantation to treat patients.

UMMC Bone Bank and USM Tissue Bank were actively involved in the Living Tissue Donor Programme. These banks collected donated femoral heads and amniotic membrane for transplantation.

Table 7.1.1 Tissue Donor Hospitals and Types of Donated Tissues sent to Bone Bank HKL, 2011

Donor Hospital	Tissue		Total
	Femur	Tibia	
Hospital Sultanah Aminah	4	4	8
Hospital Kuala Lumpur	2	2	4
Pantai Medical Centre, Kangar	2	2	4
Hospital Tengku Ampuan Rahimah, Klang	2	2	4
Total	10	10	20

Table 7.1.2 Tissue Donor Hospitals and Types of Donated Tissues sent to USM Tissue Bank, 2011

Donor Hospitals	Tissue						Total
	Femoral Head	Femur	Tibia	Humerus	Radius	Amniotic membrane	
Hospital Tengku Ampuan Rahimah, Klang	0	1	1	2	2	0	6
Hospital Pulau Pinang	23	0	0	0	0	0	23
Hospital USM	0	0	0	0	0	166	166
Total	23	1	1	2	2	166	195

Table 7.1.3 Tissue Donor Hospitals and Types of Donated Tissues sent to UMMC Bone Bank, 2011

Donor Hospitals	Tissue			Total
	Femoral Head	Femur	Tibia	
UMMC & UM Specialist Centre	44	0	0	44
UMMC	0	2	2	4
Total	44	2	2	48

7.2 HOSPITALS / CENTRES WHERE TISSUES WERE DISTRIBUTED AND THE TYPES OF TISSUES UTILISED FOR TRANSPLANTATION

The hospitals and centres where tissues were distributed and the types of tissues utilised for transplantation are shown in Table 7.2.1, Table 7.2.2, Table 7.2.3 and Table 7.2.4. No tendon, skin or fascia was distributed in 2011.

Freeze dried bone and preserved amniotic membrane were provided by USM Tissue Bank as it is the only tissue bank that processes bone and amniotic membrane.

The data in Table 7.2.5 was provided by Bone Bank HKL. It reveals that the surgeons had imported achilles tendons for transplantation and that tendons were procured where appropriate.

Table 7.2.1 Hospitals/Centres Using Musculoskeletal Tissue Allografts Provided by Bone Bank HKL, 2011

Recipient	Tissue	Total
	Deep Frozen Bone	
Hospital Kuala Lumpur	1	1
Total	1	1

Table 7.2.2 Hospitals/Centres Using Musculoskeletal Tissue Allografts Provided by USM Tissue Bank, 2011

Recipient	Tissue		Total
	Deep Frozen Bone	Freeze Dried Bone	
Hospital Tengku Ampuan Afzan, Kuantan	0	1	1
Hospital USM	8	15	23
IIUM	0	5	5
Beau Consortium Sdn Bhd	0	4	4
Enrich Medsurg Sdn Bhd	1	0	1
Orthoplus Sdn. Bhd.	1	0	1
Johnson & Johnson Sdn Bhd Medical Division	2	0	2
Nuzone Medical Sdn Bhd	3	0	3
SMT Healthcare Sdn Bhd	3	0	3
Zimmer Medical (M) Sdn. Bhd	5	0	5
ITL Healthcare S.E.A Sdn. Bhd	2	0	2
Total	25	25	50

Table 7.2.3 Hospitals/Centres Using Musculoskeletal Tissue Allografts Provided by UMMC Bone Bank, 2011

Recipient	Tissue	Total
	Deep Frozen Bone	
Hospital Raja Permaisuri Bainon, Ipoh	NR	NR
UMMC	NR	NR
UM Specialist Centre	NR	NR
Total	44	44

*NR: the actual number was not recorded

Table 7.2.4 Hospitals/Centres Using Amniotic Membranes Provided by USM Tissue Bank, 2011

Recipient	Amniotic Membrane No. of pieces
Hospital Sultanah Bahiyah, Alor Setar	30
Hospital Melaka	2
Hospital Queen Elizabeth, Kota Kinabalu	2
Hospital Selayang, Selangor	5
Hospital USM	47
Azmax Jaya Sdn Bhd	30
Taiping Medical Centre, Perak	3
CryoCord Sdn. Bhd.	45
Total	164

Table 7.2.5 Type of Allograft Used/Provided from Overseas, 2011

Donor Centre	Recipient	Tissue Achilles Tendon
Lifenet Health, USA	Hospital Kuala Lumpur	14
Community Blood Center, USA		
Total		14

7.3 TISSUE TRANSPLANTATION DATA

In 2011, the NTR did not receive any Bone and Tissue Transplant Notification Forms from health professionals who perform bone and tissue transplantation (Source Data Provider, SDP). Thus the recipient details, pre-transplant and transplant surgery data were not available to be reported in this section.