

Increase in Cord Blood Transplant-Related Activities Across the AusCord Network due to COVID-19

NGAIRE ELWOOD,^{a,b,c} GUY KLAMER,^d PHILLIP JOHNSON^e

^aBMDI Cord Blood Bank, Victoria, Australia; ^bMurdoch Children's Research Institute, Victoria, Australia; ^cDepartment of Paediatrics, University of Melbourne, Victoria, Australia; ^dSydney Cord Blood Bank, Sydney, Australia; ^eQueensland Cord Blood Bank At The Mater, South Brisbane, Queensland, Australia

ABSTRACT 14

Introduction

The SARS-CoV-2 pandemic, which became apparent globally in January 2020, has had far-reaching effects on the bone marrow transplant field, negatively affecting the availability and transport of adult bone marrow donor product for stem cell transplants. Banked unrelated cord blood (CB) is a readily available source of hematopoietic stem cells, manufactured prior to the appearance of COVID-19 and able to be shipped frozen, thereby overcoming the coronavirus-induced issues associated with adult donor sources. The AusCord network of public cord blood banks is comprised of the Sydney Cord Blood Bank, the BMDI Cord Blood Bank (Melbourne), and the Queensland Cord Blood Bank At The Mater (Brisbane), working with the Australian Bone Marrow Donor Registry (ABMDR). The AusCord banks are licensed by the Australian Therapeutic Goods Administration and are FACT accredited. The combined cryopreserved inventory exceeds 35 000 cord blood units (CBUs).

Objective

We aimed to determine the impact of the coronavirus pandemic on CB transplant-related activities, including search, reservation, and release of CBUs from the AusCord banks.

Methods

The number of CBU searches, reservations, and releases to Australian or international transplant centers during the period of January 1, 2020 to June 30, 2020 was compared with the same period in 2019.

Results

Results are shown in Table 1. Compared with the same period in 2019, an increase in all CB transplant-related activities was observed across the AusCord network in 2020. This was most pronounced in requests for Australian patients. Transplant centers were required to secure a back-up donor source for all bone marrow transplants; the increase in CB reservations reflects this requirement.

Discussion

Most CB reservation requests prompted proactive pre-release testing to enable rapid release of a CBU. CBUs that underwent this testing but were not requested for transplant remain available for rapid release in the future. The coronavirus pandemic has highlighted that banked unrelated CB is a vital stem cell source during global emergency situations.

Table 1 Cord blood transplant-related activity

Activity	January 2019 to June 2019			January 2020 to June 2020			Fold increase in activity		
	Australia	International	Total	Australia	International	Total	Australia	International	TOTAL
Number of search requests	29	70	99	69	74	143	2.4	1.1	1.4
Number of reservations	24	10	34	36	20	56	1.5	2	1.7
Number of releases	3	5	8	6	6	12	2	1.2	1.5