



Service Priorities and Programmes
Electronic Presentations

Convention ID: 252

Submitting author: Ms Chui Yee Chu

Post title: Advanced Practice Nurse, Hong Kong Red Cross Blood Transfusion Service, KCC

Iron supplement program for regular female blood donor - an interim report

Chu CY(1), Li SY(1), Leung NS(1), So KL(1), Lee YM(1), Lee CK(1)

(1)Blood Collection & Donor Recruitment Department, Hong Kong Red Cross Blood Transfusion Service

Keywords:

Blood donor

Iron

Blood donation

Introduction

Adequate blood supply is a critical element to be maintained in a stable health care system. In Hong Kong, the blood demand is continued to increase with aging population which also brings into shrinking donor pool. In 2013, the Blood Transfusion Service (BTS) collected more than 247,000 units of whole blood in order to meet the demand. Only 17% of which were donated by new donors. Therefore, the blood supply depends heavily on the contribution by regular donors. It has been observed in many countries that donors with frequent donor donation are found to have low iron store. With a typical 450 ml blood donation, up to 225mg of iron will be lost from the body which should normally be replenished before the next donation. However, many of these frequent donors are unable to replenish the iron loss from their diet within the donation interval. It is particularly seen in childbearing age women whom they have greater iron needs than men as a result of menstrual blood loss and increased iron demands when they are pregnant. Therefore, replenishment of iron store is getting more important to prevent iron deficiency among regular female blood donors.

Objectives

The study aims to look at the change in pre-donation haemoglobin level of female repeated donors upon receiving a course of iron supplement.

Methodology

The BTS piloted an iron supplement program for regular donors since September 2012. A 16-day course of iron supplement is dispensed to every eligible regular donor who had a history of successful blood donation within the previous six months. Each daily dosage of iron supplement contains 99 mg of elemental iron. Upon dispensing the iron supplement, the BTS nurses also provide an educational session on the iron supplement, as well as knowledge on how to improve the iron absorption from an iron rich diet.

Result

During a ten-month period, 28,416 courses of iron supplement were dispensed to

eligible donors of whom 6,098 female iron receiving donors returned for blood donation within 180 days. There was an overall decrease in pre-donation haemoglobin level among regular female blood donors in the subsequent blood donation. The iron supplement groups with subsequent donation interval between day 105-120 and day 121-180 show statistically significant less decrease in the pre donation haemoglobin level when comparing with the non iron supplemented group in their subsequent blood donations. The study indicates that (1) repeated female donors may not be able to maintain their pre-donation haemoglobin level in subsequent donation, and (2) the iron supplement program do help limiting the decline at their subsequent blood donation. It is postulated that physiological loss and poor iron intake from diet may be the key reasons preventing them from adequate iron replenishment. Exploring the root causes of poor iron replenishment should be of more importance than just giving the iron tablet after donation. Besides, the program to further enhance the awareness of adequate intake and better dietary habit through education may improve the overall effectiveness of iron replenishment. Ultimately, it may increase the pool of stable, healthy and eligible donor pools that can be able to meet the growing blood demand.