



Service Priorities and Programmes Electronic Presentations

Convention ID: 1021

Submitting author: Dr Ka Lok CHAN

Post title: Resident, Princess Margaret Hospital

Evaluation of the Red Cell Transfusion Practice in a Medical Unit

Chan KL(1), Mak WMV(1), Tam YH(2), Lee KKH(1)

(1) Division of Haematology, Department of Medicine and Geriatrics, Princess Margaret Hospital, (2) School of Public Health, the University of Hong Kong

Keywords:

Blood Utilisation

Transfusion Practice

Introduction

Randomised-controlled trials demonstrated that restrictive red blood cell (RBC) transfusion was not inferior to a liberal approach. Transfusion at haemoglobin (Hb) concentration of 7-8g/dL and a single-unit policy in stable hospitalised patients was recommended. Transfusion decision has to be judicious because transfusion is not without risk and the demand for blood products is increasing. The practice of RBC transfusion is however highly variable in different centres.

Objectives

To evaluate the RBC transfusion practice in the medical unit of a single regional hospital by (1) analysing transfusion prescriptions, and (2) surveying physicians' transfusion decision in different hypothetical scenarios.

Methodology

The study was carried out during March to June 2016. In the first part, 101 transfusion episodes were analysed. Medical records were reviewed for patients' demographics, indication of transfusion, transfusion trigger (pre-transfusion Hb) and number of RBC unit(s) prescribed.

The second part was a survey of doctors. A questionnaire consisting of 3 hypothetical scenarios of anaemia was designed: (1) acute upper gastrointestinal bleeding (AGIB), (2) severe pneumonia, and (3) metastatic lung cancer. Clinicians were asked to indicate the transfusion trigger (6, 6.1-7, 7.1-8, 8.1-9, >9g/dL) in each scenario. Then each scenario was also modified by an additional factor and the transfusion trigger was asked again. These modifying factors were respectively changing the age of patient from 60 to 80 years old, concomitant ischaemic heart disease (IHD), and chronic renal failure (CRF).

Result

The mean age of patients receiving RBC transfusion was 63.6 ± 13.3 years. 61% were male. 67% were inpatients and 33% were ambulatory care patients. The median transfusion trigger [IQR] was 7.2[6.5-7.8] g/dL. 14 patients (14%) were transfused with Hb > 8g/dL but only one of them had on-going blood loss. In 47% of transfusion episodes, ≈ 2 units of RBC were administered.

58 surveys were returned from clinicians (12 interns, 19 trainees and 27 specialists; response rate: 58%). The modal transfusion trigger was 7.1-8g/dL in all the 3 hypothetical cases. Comparing with the pneumonia scenario, the preferred transfusion trigger was higher in AGIB ($p=0.01$) but lower in metastatic cancer (p). We concluded that there were variations in red cell transfusion practice among clinicians. Standardised local transfusion guidelines would be helpful to improve blood utilisation.