

Title: The Safe Administration of Rapid Rituximab Infusion: An Evidence-Based Approach

Name: Siew Ping Lang

ID: 1216095

School: The Joanna Briggs Institute, Faculty of Health Science

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Abstract

The goal of this study was to approach a global clinical issue that is imperative using an evidence-based approach to the investigation of the rapid administration of rituximab infusions for non-Hodgkin Lymphoma (NHL) and Chronic Lymphocytic Leukemia (CLL). This study focused on an evidence-based approach to improving patient safety, drawing on the Joanna Briggs Institute's model of evidence-based health care with its particular emphasis on evidence synthesis, evidence generation and evidence transfer.

The study consists of two central phases. The first phase is a comprehensive systematic review (CSR), which informed the design of a subsequent primary study that constitutes the second phase.

The specific systematic review question was: *“How safe is it to administer rituximab rapidly for NHL and CLL patients?”* The objective was to identify and synthesise the existing published and unpublished literature on the use of rapid rituximab infusion as an alternative infusion rate and its safety. The systematic review found that rapid rituximab infusion is not safe for chronic lymphocytic leukemia (CLL) patients yet it is safe for non-Hodgkin Lymphoma (NHL) patients. However, there was insufficient evidence to address other aspects of clinical concern related to the safe administration of the rapid infusion of rituximab. Therefore, a retrospective cohort study was conducted in Royal Adelaide Hospital (RAH), South Australia to elicit evidence that informs our current understanding of rapid rituximab infusion. The findings of the study identified high lymphocyte counts as the sole predictor of the occurrence and frequency of adverse drug events such as hypotension, hot flushes and itchiness. The evidence generated from the systematic review and primary study was transferred into a clinical guideline on administering rapid rituximab infusion safely and a pamphlet

for patients who are receiving the rapid regimen was developed.

Declaration

NAME: Siew Ping Lang

PROGRAM: Doctor of Philosophy

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