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A Retrospective Review on the Appropriateness of Acid Suppression Therapy for Stress Ulcer Prophylaxis after Intensive Care Unit Stay

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Introduction

Acid suppression therapy is commonly prescribed to patients in Intensive Care Unit (ICU) for stress ulcer prophylaxis. However, such therapy may be continued unnecessarily after the ICU stay, and even after hospital discharge.

Objectives

The study aimed to determine the appropriateness of acid suppression therapy initiated in ICU for stress ulcer prophylaxis and subsequently continued after ICU stay.

Methodology

Medical records of patients who admitted to ICU from 1 January 2011 to 31 December 2011 with acid suppression therapy initiated were reviewed. Evaluation of therapy appropriateness was based on pre-defined assessment criteria on indication for stress ulcer prophylaxis and other appropriate indications of acid suppression therapy. Percentages of appropriate acid suppression therapy were compared between ICU stay, post-ICU stay in general ward and at hospital discharge. Potential adverse outcomes of acid suppression therapy, including risk of pneumonia, Clostridium difficile infections and extra drug expenditure, were also reported for the first year of therapy initiation.

Result

One hundred ninety-seven patients were included in the study. Percentages of appropriate acid suppression therapy in ICU, general ward and at hospital discharge were 93.9%, 65.0% and 62.9% respectively. Patients started acid suppression therapy for stress ulcer prophylaxis in ICU was associated with greater proportion of inappropriate use after ICU stay. For secondary outcomes, no significant difference was found in the incidence of pneumonia and Clostridium difficile infections between patients with appropriate use and inappropriate use of acid suppression therapy. The

extra drug expenditure due to inappropriate acid suppression therapy was HK\$17,984.9 in the first year of therapy initiation. Inappropriate continuation of acid suppression therapy was observed after ICU stay. Pharmacist interventions such as medication reconciliation, protocol implementation and staff education could be the potential strategies to minimize the overutilization. Further studies should also be carried out on the adverse outcomes associated with inappropriate acid suppression therapy, such as the increase in risk of infections.