



Service Priorities and Programmes
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Improving the Emergency Department management of post-chemotherapy sepsis in hematological malignancy patients

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Introduction

Neutropenic sepsis is common among post chemotherapy hematological malignancy patients. Major international guidelines advocate early identification and administration of empirical antibiotics within 1 hour of Emergency Department (ED) presentation, sometimes even without availability of hematological proof of neutropenia. In view of this, the Accident and Emergency Department and Medical Department of Queen Elizabeth Hospital are the first in Hong Kong to implement a protocol on the management of post-chemotherapy fever patients in June 2011. This protocol included febrile patients with hematological malignancy who had received chemotherapy within one month of ED visit. Those patients were identified at triage station followed by a fast track consultation. The target was administration of empirical antibiotics after taking appropriate culture sample with the Door-To- Needle (DTN) time less than 60 minutes

Objectives

To identify the compliance rate among ED physicians, the DTN time before and after the implementation of the protocol and the impact of the protocol on A&E service

Methodology

We performed a retrospective review of the patients enrolled in the protocol from June 2011 to July 2012. Post chemotherapy fever cases presented one year prior to the protocol were chosen as historical control

Result

50 patients were enrolled in the protocol while 19 patients were historical control. The mean age was 56. Acute myeloid leukemia was the most common malignancy encountered. 88% of all patients presented with sepsis syndrome. The mean DTN time of the enrolled group was 47 minutes while the mean DTN time in the control group was 5 hours . 86% of the enrolled patients met the target DTN time. In the contrary, none of control group patients met the target. Blood culture was performed in ED in all enrolled group patients but only 16% in control group. The average ED

length of stay was 72 and 105 minutes among enrolled and control group, respectively. The average hospital length of stay (LOS) was 11 days in enrolled group compared to 15 days in control group. In conclusion, the implementation of protocol can shorten the DTN time to less than 60 minutes in majority of study patients, which is now the gold standard of care in sepsis patients to improve survival. The compliance rate is high . There is a trend towards shortening the hospital LOS. While the implementation of the protocol does not lengthen the ED length of stay, it is proven to be feasible in a busy Emergency Department through an excellent teamwork between nurses and emergency physicians