

Nurses' Knowledge and Practice of Neutropenic Care for Infection Prevention in Patients with Cancer

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ABSTRACT

Background: Patients undergoing chemotherapy are susceptible to neutropenia. Neutropenia is serious hematology toxicity that will make the patients at risk for life-threatening infection. The nurses' knowledge and practice of neutropenic care are essential in providing effective, safe, quality care in the prevention of infection.

Objective: To assess nurses' knowledge and practice of neutropenic care for infection prevention in patients with cancer.

Methods: We conducted a cross-sectional study using an online survey from October to December 2020. An invitation to complete the survey was shared with the nurses working in the oncology, hematology, and emergency department via email in a teaching hospital. Data were analyzed by using SPSS statistical software.

Results: A total of 260 nurses dealing with patients undergoing chemotherapy were invited to participate in the study. Of these, 129 nurses responded, with a response rate of 49.6%. A total of 66 (51.2%) and 62 (48.1%) nurses reported a good and moderate level of knowledge on neutropenic care for infection prevention. The majority of the nurses (n=120, 93%) reported a good level of practice on neutropenic care for infection prevention. The following items were answered correctly by only a small number of nurses: neutropenia is

characterized by a decrease in neutrophils and thrombocytes (7%); a patient is classified as neutropenic when the neutrophil counts 2,500 cells/mm³ (27.9%); One of the signs of infection in patients with neutropenia is glycosuria (27.1%). The nurses' knowledge was significantly associated with place of work, while their practice was significantly associated with age, nursing position, working experience, place of work, and whether they have a post-basic course. The nurses' knowledge was positively significantly correlated with nurses' practice ($r=0.75$, $p=0.001$).

Conclusion: Slightly more than half of the nurses' have good knowledge while the majority of the nurses have good practice of neutropenic care. The result indicates that education related to the pathophysiology of neutropenia is needed to strengthen the nurses' knowledge on neutropenic care for infection prevention in patients with cancer.