بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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شبكة المعلومات الجامعية

التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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MONA MAGHRABY

Evaluation of Nurses' Performance regarding Fluid and Electrolytes Imbalance among Children suffering from Cancer

Thesis
Submitted for Partial Fulfillment
of the Requirement of Master Degree in Pediatric Nursing

By

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2020

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List of Contents

List of Tables

List of Figures

Evaluation of Nurses' Performance regarding Fluid and Electrolytes Imbalance among Children suffering from Cancer

Abstract

Introduction: Electrolyte and acid–base disturbances are common in children with cancer, due to either the malignancy or treatment of the malignancy. A child may develop metabolic acidosis from lactate produced by disseminated lymphoma or from chemotherapy-induced diarrhea. **Aim:** The study aimed to evaluate the nurses' performance regarding fluid and electrolytes imbalance among children with cancer. **Design:** A descriptive design was utilized in carrying out this study. **Subject**: A purposive sample composed of 100 nurses worked at pediatric oncology department children hospital affiliated to Ain shams university hospital and National Cancer Institute at Tanta affiliated to general secretariat of the specialized center. **Tools:** Interviewing questionnaire sheets to assess demographic characteristics of nurses, related nurse's knowledge about fluid and electrolytes imbalance of child suffering from cancer and **Observational Checklist** assess the nurse's practices regarding fluid and electrolytes imbalance of child suffering from cancer. **Results:** 68% of the studied nurses have unsatisfactory knowledge about fluid and electrolytes imbalance of children suffering from cancer and60% of the studied nurses were incompetent practices regarding care for fluid and electrolytes imbalance among children suffering from cancer. **Conclusion:** There was a statistically significant difference between gender, age, qualification, attending training course of the studied nurses and their total knowledge regarding care of fluid and electrolytes imbalance among children with cancer. There were statistically significant differences between all nurses' characteristics as previously mentioned and their total practices regarding care of fluid and electrolytes imbalance among children suffering from cancer. **Recommendation:** Enhance nursing managing of electrolyte disturbances, providers will hopefully be able to impart a more consistent and effective therapeutic regimen to children suffering from cancer.

Keywords: Oncology, Fluid, Electrolyte Disturbances, Chemotherapy

Introduction

Fluid and electrolyte therapy is an essential component of the care of hospitalized children and a thorough understanding of the changing requirements of growing children is fundamental in appreciating the many important pharmacokinetic changes that occur from birth to adulthood **(Mutnuri, et al., 2016)**.

Cancer is a common etiology for hyponatremia in the hospitalized child.. In children with cancer, in those who had hyponatremia prior to chemotherapy initiation, failure to achieve normonatremia within the first two cycles of chemotherapy was a predictive marker for decreased survival **(Huang, et al., 2018)**.

Hyponatremia associated with cancer may have several potential etiologies. Regardless of the etiology, children may be asymptomatic with mild to moderate disease but may experience headache, fatigue, and mental status changes with moderate to severe hyponatremia **(Turcotte, et al., 2017)**.

In cancer-distinct causes, chemotherapy leads to hypokalemia indirectly via side effects of decreased appetite

intake, vomiting, and diarrhea or directly via renal tubular effects. Ifosfamide causes renal potassium wasting, either as an isolated proximal tubulopathy or Fanconi syndrome (FS), which may persist after treatment **(El Malla, 2017)**.

The potassium losses in these cases may be profound and require aggressive replacement. The choices for replacement are the same as those utilized for hypokalemia in the noncancer child,but it should be noted that the children with cancer may have difficulty oral intake due to nausea, mucositis, so intravenous dosing is often necessary **(Jayasekara, et al., 2016)**.

Nurses have an important role in implementing appropriate strategies to minimize the occurrence of chemotherapy-induced nausea and vomiting. As well as pharmacological agents, advice regarding eating little and often, avoiding strong smells, and an understanding that it is okay to abstain from food intake for 24 hours as long as fluid intake is good. Non-pharmacological interventions, including acupressure and acupuncture, have also been used with some effect **(Yohei, et al., 2016)**.

The role of the pediatric nurse is much respected, and there is a wealth of knowledge about side effects of chemotherapy. However, the development of additional skills to meet the children demands, including primary care providers, may also is critical in providing comprehensive psychosocial care after treatment **(Abd Elhady, et al., 2016).**

The significance of the Study:

Many cases post chemotherapy administration are suffering from massive vomiting and diarrhea, which may be rapidly converted to dehydration that causes fluid and electrolytes imbalance. Fluid and electrolytes imbalance is a major predisposing factor for disturbance of organ function and rapid disturbance of the consciousness.

So that the nurse needs to be alert, has sufficient knowledge and practice regarding such problems to avoid and prevent Fluid and electrolytes imbalance and its complication.

The Aim of the Study

This study aimed to evaluate the nurses' performance regarding fluid and electrolytes imbalance among children suffering from cancer.

Research Question

- What is the level of nurses' knowledge about fluid and electrolytes imbalance among child suffering from cancer?
- What is the level of nurses' practices about fluid and electrolytes imbalance among child suffering from cancer?
- Is there correlation between nurses' knowledge and their practices regarding care of children suffering from fluid and electrolytes imbalance?