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Effect of the Clinical Pathway Application on Neonates having Tracheoesophageal Fistula

Thesis

Submitted for the Partial Fulfillment of Doctorate Degree in Pediatric Nursing

By

Rasha Mohamed Ahmed

Master Degree (2013)

Faculty of Nursing /Benha University

Nursing Director in Benha Children Hospital

Faculty of Nursing

Ain Shams University

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Under Supervision of

Prof. Dr. Iman Ibrahim Abd Al-Moneim

Professor of Pediatric Nursing

Faculty of Nursing- Ain Shams University

Dr. Madiha Amin Morsy Abou Khalaa

Em. Professor of Pediatric Nursing

Faculty of Nursing - Ain shams University

Faculty of Nursing

Ain Shams University

2020

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Abbreviations	Name of abbreviations
CDCP	Centers for Disease Control and Prevention
EA	EsophagealAtresia
EBM	Evidence Based Medicine
ECG	Echo Cardio Gram
GA	Gestational Age
GIT	Gastro Intestinal Tract
HCPs	Health-care professionals
HRN	High Risk Neonate
IV	Intravenous
LPN	Licensed Practical Nurse
NANDA	North American Nursing Diagnosis Association
NHS	National Health Services
NPO	Nothing Per Mouth
NPs	Nurse practitioners
PAS	Physician Assistants
RN	Registered nurse
SD	Standard Deviation
SNICUs	Surgical Neonatal Intensive Care Units
TEF	Tracheoesophageal Fistula
WHO	World Health Organization

Abstract

Neonates with tracheoesophageal fistula are demanding the integration of skills from different specialties.Therefore. The application of a clinical pathway for children with tracheoesophageal fistula is urgent. **Aim of The study** was to assess the effect of application of clinical pathway on neonates having tracheoesophageal fistula. **Research design**: A quasi experimental study was utilized. **Research settings:** The study was carried out at the Neonatal Intensive Care Unit at Children Hospital Ain Shams University and Benha Children Hospital. **Subjects:** A purposive sample included sixty neonate those were diagnosis tracheoesophageal fistula admitted to previously mentioned two settings and divided to two identical group thirty subjects for each) the group exposed to routine hospital care was considered as control group; and that exposed to clinical pathway was considered as study group (in addition to sixty nurses working in the previously mentioned settings. **Tools of data collection** Interview Questionnaire Sheet was used to assess knowledge of the studied nurses regarding clinical pathway and care of tracheoesophageal fistulafor neonate Medical data sheet ,neonatal assessment sheet and Complication monitor sheet **Results** The results revealed there was no statistical difference between study and control on admission but there was statistical differences between control and study after the implementation of clinical pathway manifested by less hospital stay no complication and less readmission. **Conclusion:** there were positive effects of clinical pathway on neonates with tracheoesophageal fistula manifested by decrease in the length of hospital stay and no complications on discharge. **Recommendation:** The usage of clinical pathway for tracheoesophageal fistula

Key words: clinical pathway, Neonates, tracheoesophageal fistula.

Introduction

Clinical pathway is standardized and evidence-based interdisciplinary care management plans, which identify an appropriate sequence of clinical interventions, time frames, milestones and expected outcomes for defined group of pediatric neonates during a well-defined period. It represents the minimum standard of care and ensures that the essentials are not forgotten and are performed on time ***(Vanheacht et al., 2016).***

Clinical pathway is a road map for neonate as well as for the treatment team, which supports an efficient and effective in neonatal care. It is a care plan that details the essential steps in the care of Neonates with a specific clinical problem and describes the expected progress of their condition ***(Heissler, 2016).***

Clinical pathway provides a detailed guidance for each stage in the management of neonate such as treatments and interventions and includes the Neonatal progress and outcomes details as mortality, complications, length of hospital stay and hospital costs ***(Campbell et al., 2015).***

Clinical pathways have emerged as one of the most popular new initiatives to reduce costs while maintaining or even improving the quality of care. It is multidisciplinary

guide lines are developed for use in a specific Neonatal population. It coordinates neonate care, thus improving overall quality of care ***(Moore and McQuestion, 2015).***

Tracheoesophageal Fistula (TEF) is an congenital anomalies of Gastro Intestinal Tract (GIT) in which there communication between the trachea and esophagus. When associated with Esophageal Atresia (EA), the fistula most commonly occur between the distal esophageal segment and trachea, the incidence is 1per 3000 to 4000 live births ***(Blackburn, 2016)***.

Esophageal Atresia (EA) alone or with TEF occurs in approximately one in 4, 000 live births. EA and TEF are gastrointestinal anomalies in which the esophagus and trachea don't separate normally during embryonic development. EA refers to a congenitally interrupted esophagus where proximal and distal ends don't communicate; the upper esophagus segment ends avertible distance above diaphragm ***(Blackburn, 2016).***

It is a birth defects, the causes is unknown. Neonate born with EA/TEF may initially appear to swallow normally. However, the first signs of EA/TEF may be the presence of tiny, white, frothy bubbles of mucus in the neonate’s mouth and sometimes in the nose as well. When

these bubbles are suctioned away, they reappear. This symptom occurs when the blind pouch begins to fill with mucus and saliva that would normally pass through the esophagus into the stomach. Instead these secretions back up into the mouth and nasal area, causing the neonate to drool excessively ***(Torrey, 2014).***

The Neonate with Esophageal atresia (EA), with or without tracheoesophageal fistula, is unlikely to survive without surgery to reconnect the esophagus. The procedure is done as soon as possible; however, prematurity, the presence of other birth defects, or complications of aspiration pneumonia may delay surgery ***(Diaz et al., 2016).***

Surgery is conducted while the Neonate is under general anesthesia; a tube is placed through the mouth to continuously suction the esophageal pouch during the procedure. An intravenous (IV) line is established to allow fluids to be administered as needed during surgery. Usually, the Neonate is placed on a ventilator, with a tube placed down the airway for at least the length of the surgery ***(Rebort et al., 2016).***

The nurse is responsible for receiving the neonates, develops a partnership with family, gathers relevant