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EFFECT OF POSTOPERATIVE CHEST PHYSIOTHERAPY PROGRAM FOR CONGENITAL HEART DISEASE IN PEDIATRIC CARE UNIT

Thesis
Submitted in Partial Fulfillment for the Requirement of
Master Degree in Physical Therapy

By
SAMAH MOHAMED ABD EL- AZEM EL-SADANY
B.Sc. in Physical Therapy
Department of Physical Therapy for Growth and Developmental Disorders in Children & Its Surgery

SUPERVISORS

Prof. Dr. Faten Hassan Abd El-Azem
Professor in the Department of Growth and Developmental Disorders in Children and its Surgery
Faculty of Physical Therapy
Cairo University

Prof. Dr. Zeinab Salah Seliem
Head of Surgical Cardiac Intensive Care Unit Professor of Pediatrics
Faculty of Medicine
Cairo University

Dr. Mohamed Hafad El-Hamadany
Consultant of Pediatric Physical Therapy
Cairo University Hospitals

Faculty of Physical Therapy
Cairo University
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Effect of postoperative chest physiotherapy program for congenital heart disease in pediatric care unit. ***Samah Mohamed Abd El-Azem El-Sadany.** Supervisors: ****Prof. Dr. Faten Hassan Abd El-Azem.** Professor in the Department of Growth and Development Disorders in Children and its Surgery. *****Prof. Dr. Zeinab Salah Seliem.** Head of Surgical Cardiac Intensive Care Unit. Professor of Pediatrics. ***Dr. Mohamed Hafad El-Hamadany.** Consultant of Pediatric Physical Therapy. Master thesis, 2010.
*Faculty of Physical Therapy. Cairo University Hospitals.
**Faculty of Physical Therapy. Cairo University.
***Faculty of Medicine. Cairo University.

Abstract

The purpose of the current study was to investigate the effect of postoperative selected chest physiotherapy program for various types of congenital heart diseases in pediatric care unit. **Subject:** Thirty infants of both sexes (22 males and 8 females) in the immediate postoperative period following cardiac surgery in Cardio-Pulmonary intensive care unit (ICU) with age ranged from 3 months to 17 months were included in the study. They were classified into two groups of equal number (control group A and study group B) which were matched in age, sex, severity and complexity. **Methods:** Both groups were assessed in their first day postoperative for arterial blood gases (PH, $PaCO_2$, PaO_2, and SaO_2), peripheral oxygen saturation by pulse oximetry (SPO_2) and chest X-ray; these examinations were repeated by the end of 1st week (critical stage), 2nd week (weaning stage) and 3rd week (last stage), except the chest X-ray that was repeated by the end of 3rd week. Control group (A) received medical treatment in addition to traditional postoperative respiratory care in form of (humidification, vibration and suctioning). Study group (B) also received the same as in control group in addition to selected chest physical therapy program which included modified posture drainage, percussion, specialized breathing techniques, and assisted cough techniques. The treatment program was conducted for 6 days per / week for 3 successive weeks. Each session was applied for 30 minutes, three times daily thus offering total physiotherapy program of one hour and half daily for 3 weeks. **Results:** The post treatment findings of the current study at the end of last stage revealed that there were signs of moderate hypoxemia and respiratory acidosis in the control group when compared to the results of the study group that showed very mild hypoxemia and normal acid-base balance. By comparing pre to post treatment, the control group deteriorated from critical to last stage, while in the study group the deterioration degree was lower than the control group till the weaning stage then study group showed improvement in last stage. The study group had less pulmonary complications in form of pneumonia and atelectasis than in the control group. **Conclusion:** Selected chest physiotherapy program was very effective in preventing or at least minimizing the incidence of pulmonary complications. Consequently chest physiotherapy program was considered as an integral part of the postoperative management for infants with congenital heart diseases in pediatric care unit.

Key word: Postoperative chest physiotherapy program, congenital heart disease, pediatric care unit.

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