

Nursing Care in the Case of Infants with Acute Respiratory Infections with Ineffective Airway Nursing Problems: A Case Study

Leni Agustin¹, Hamidah Retno Wardani¹, Dinda Oktaviani¹, Siti Riskika¹

¹ Nursing Study Program, Universitas Bondowoso, Indonesia

Correspondence should be addressed to:
Leni Agustin
lenikarim86@gmail.com

Abstract:

Acute respiratory infections that attack the upper and lower tract in a stimulant or sequential manner that lasts up to 14 days This can certainly result in the risk of inability to clear secretions or even obstruction of the airway. The purpose of the study was to provide nursing care to overcome patient problems. This research is a case study of 1 infant who experienced acute respiratory infection with the nursing problem of ineffective airway clearance for 3 days on May 15-18, 2023. The subject in this study was Baby. A who was male and 35 days old who was admitted to the pediatric ward (Melati) of Dr. H. Koesnadi Bondowoso Hospital with the main complaint of shortness of breath who met the inclusion criteria with data collection techniques of interviews, observation, physical examination and documentation studies. The instrument used is the pediatric nursing assessment form and the SOP for action according to applicable regulations. The results of this study were obtained from the assessment, namely ineffective airway clearance in accordance with the theory, and diagnoses in accordance with the client's condition. In implementation refers to nursing interventions using SIKI which are tailored to the client's condition as well as evaluation refers to the overview, goals and specific objectives that have been set. The evaluation results obtained complaints of tightness and reduced secretion production, RR: 46 x/min, SpO2: 98%.

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INTRODUCTION

Acute respiratory infection (ARI) is an acute respiratory tract infection that attacks the throat, nose, and lungs and affects the structure of the channel above the larynx, but most of these diseases affect the upper and lower tracts stimultantly or sequentially (Pitriani, 2020; Firza et al., 2020). Respiratory tract infection (ARI) lasts up to 14 days and can be transmitted through saliva, blood, sneezing, or respiratory air containing germs, which begins with symptoms such as a common cold, cough, fever, sneezing, sore throat, headache, thick secretions, nausea, vomiting and anorexia (Afifah, 2021; Kurniyawan et al., 2023). This can certainly result in the risk of inability to clear secretions or even airway obstruction.

ARI is also the third leading cause of death in the world and the leading killer in low- and middle-income countries. Deaths from ARI are ten to fifty times higher in developing countries than in developed countries. ARI belongs to the class of Air Borne Disease, which transmits the disease through the air. Pathogens that enter and infect the respiratory tract and cause inflammation (Lubis & Ferusgel, 2019; Sartika & Wahyuni, 2021).

Excessive sputum production results in inflammation and narrowing of the airway which has symptoms of fever, cough for less than two weeks, runny or stuffy nose and sore throat (Diba, 2024). The narrowing of the airway can interfere with meeting the patient's oxygenation needs, which, if not met within a certain period of time, the body experiences persistent damage and causes death. Efforts that can be made to prevent ARI include increasing rest so that the body can quickly recover and fight infection. Consume plenty of water, this is important to help thin the phlegm, making it easier to expel (Rengga et al., 2021). ARI can also cause problems both medical and nursing. In nursing problems, ARI can cause nursing diagnoses such as: Ineffective Airway Clearance, Hyperthermia, and Activity Intolerance. The most common is Ineffective Airway Clearance (Sinaga & Sulistiono, 2022; Restu, 2021).

Nursing care is a series of individual nursing processes for patients through assessment, determining nursing diagnoses, planning, implementing nursing actions, and evaluating patients. This nursing care planning is individualized and responsive to the patient's unique needs, which aims to develop strategies to overcome patient obstacles or problems. Nurses periodically review the patient's progress and revise the care plan according to the patient's needs (Christina et al., 2019; Kurniyawan et al., 2024). This research is a case study with the aim of providing nursing care to clients experiencing URI disease with ineffective airway clearance nursing problems.

STUDY DESIGN

This research is a case study that explores phenomena intensively with clear and detailed boundaries. In-depth data collection was obtained through various sources so as to obtain a clear picture of a case on the respondent. The focus in the study is on phenomena obtained from individual activities within the span of 24-hour nursing services. However, this case study has time and place limitations in its implementation. In this study, a case study was conducted to explore the problems of Baby A who experienced acute respiratory infections with ineffective airway clearance nursing problems for 3 days starting from May 15, 2023, to May 18, 2023, in the Melati Room of Koesnadi Bondowoso Hospital. The subject of the study was the client was Baby A who was male and 35 days old who was admitted to the pediatric ward (Melati) of Dr. H. Koesnadi Bondowoso Hospital with the main complaint being shortness of breath who met the inclusion criteria including pediatric clients aged between 1 month and 1 year, clients experiencing coughing for approximately 2 to 3 days and clients experiencing shortness of breath.

The data collection methods used are interviews, observations, physical examinations, and documentation studies, the instruments used are assessment forms, diagnoses, interventions, pediatric nursing evaluations, and SOP actions according to applicable regulations. The interviews with families and nurses obtained data in the form of client identity, chief complaints, history of current illness, history of previous illness, family history of illness, history of allergies, immunization history, and health function patterns. Observation and physical examination were carried out by inspection, palpation, percussion, and auscultation of the client's body system. A document study was conducted by examining client data in medical records.

The ethical foundation in the preparation of this case study is the informed consent of the respondent to be studied with the writing of the research subject listed anonymously on the basis that the details of the data obtained in this study remain confidential. This research was ethically tested on May 1, 2023. It was conducted at the Health Research Ethics Commission of the Faculty of Health Sciences, University of Muhammadiyah Jember, with number 0199/KEPK/FIKES/XII/2023.

PATIENT INFORMATION

The results of the assessment are obtained based on the assessment of the client and the client's mother, the nursing problem that can be established in this case is ineffective airway clearance. Researchers will describe the results of research based on the stages of the nursing process. Based on the results of the assessment, subjective data were obtained: The client's mother said her child had been shortness of breath for about 3 days. From the objective data obtained the following results: the client looks often coughing and appears to have difficulty breathing, appears to have respiratory muscles, appears excessive sputum production, restless, looks pale, there are additional ronchi breath sounds and vital signs (RR: 49 x/min, S: 37.5°C), SpO2: 98%, hemoglobin: 9.2 g/dl). Based on the analysis of the data obtained, nursing diagnoses of ineffective airway clearance associated with retained secretions can be established. Nursing interventions on the problem of ineffective airway clearance are carried out by nursing actions for 3 times 24 hours on May 15 - May 18, 2023, including Monitoring Breathing Patterns, maintaining airway patency, performing suction, and collaborative nebulizer administration. The problem was resolved with the results obtained; the client's mother said her child was no longer short of breath, effective cough increased, breathing frequency improved, breathing patterns improved, and sputum production decreased. This is in accordance with the predetermined outcome criteria.

ASSESSMENT

Basic data collection includes subjective data and objective data on Baby A. The obtained data from the client's mother said the client was short of breath, and based on objective examination data, it can be proven that by hearing additional ronchi breathing sounds and excessive sputum production. This is in accordance with the theory which states that ineffective airway clearance is caused by infection in the lower respiratory tract, resulting in increased sputum production and resulting in consolidation of sputum fluid in the airway, which produces exudate, which can interfere with the airway (Mandan, 2019). The intervention arranged according to SIKI is airway management, which aims to identify and manage airway patency. In the author's opinion, Baby. A has symptoms of ineffective airway clearance due to an increase in excessive and retained secret production. This can be caused by infectious and inflammatory processes caused by humid and dirty home environmental factors.

NURSING DIAGNOSES

Nursing diagnoses proposed by researchers in Baby. A is ineffective airway clearance obtained through assessment and in accordance with theory. According to SDKI (Indonesian Nursing Diagnosis Standards), Ineffective Airway Cleansing is the inability to clear secretions or airway obstruction to maintain a patent airway. Which can be caused by airway hypersecretion, retained secretions, infectious processes, etc. This is characterized by subjective major symptoms and signs of activity intolerance according to SDKI (Indonesian Nursing Diagnosis Standards), ineffective cough, inability to cough, excess sputum, wheezing, wheezing, and / or dry ronchi. In the opinion of the researcher, based on subjective data and objective assessment of Baby A and based on theory, the researcher raised the nursing problem of ineffective airway.

NURSING INTERVENTION

The author has taken nursing interventions based on theory. Nursing planning refers to the SIKI book (Indonesian Nursing Intervention Standards), namely airway management: Observation: 1) Monitor breathing patterns (frequency, depth, breath effort), 2) Monitor additional breath sounds (e.g. gurgling, wheezing, wheezing, dry ronkhi). Therapeutic: 3) Maintain airway patency, 4) Position semi-fowler or fowler, 5) Encourage exclusive breastfeeding. Education: 6) Encourage fluid intake of 700ml/day, if not contraindicated, 7) Teach the baby the technique of removing phlegm. Collaboration: 8) Collaborate with bronchodilators, expectorants, mucolytics if necessary. In the opinion of the researcher, the intervention carried out by the researcher on the client Baby. A uses 8 interventions and is based on SIKI (Indonesian Nursing Intervention Standards).

NURSING IMPLEMENTATION

Implementation applied to clients Baby. A is with predetermined interventions. Its application refers to SIKI (Indonesian Nursing Intervention Standards) which has been adapted to the client's circumstances and makes it easier to carry out the nursing care process. Implementation is the stage in implementing a nursing action plan that has been determined for nurses, clients and families. The planned intervention is to carry out the implementation. In the opinion of the researcher, the implementation of the first-day meeting to the third-day meeting went according to the intervention plan, which made Baby's condition. A is getting better day by day as evidenced by at first Baby. A came to the hospital with tightness until the tightness decreased on the third day.

NURSING EVALUATION

The results of the first day of evaluation on May 15, 2023, there are still problems that need to be resolved; from the entire implementation, the researcher took 8 interventions carried out when Baby A was treated. With the results of the evaluation: The client's mother said that Baby A's tightness had decreased slightly, General condition: weak, RR: 46 x/min, S: 37.5°C, Pulse: 190 x/min, SpO2: 98%—problems in Baby A are partially resolved based on goals and criteria. The results are 1. Frequency of Breathing Improved (4), 2. Breathing Pattern Improved (4), 3. Sputum Production Decreased (4).

At the second meeting evaluation on May 16, 2023, the problem was partially resolved while still implementing the entire intervention namely the researcher took 8 times to implement the intervention. With evaluation results: The client's mother said Baby A's shortness of breath had decreased significantly, General condition: weak, RR: 46 x/min, S: 36.5°C, Pulse: 185 x/min, SpO2: 98%. The problem in Baby A is partially resolved based on the objectives and criteria. The results are 1. Frequency of Breathing Improved (4), 2. Breathing Pattern Improved (4), 3. Sputum Production Decreased (4).

Evaluation is the final step in the nursing process by identifying the extent to which the objectives of the nursing plan have been successfully achieved. The overall evaluation of this action is to assess the success of the actions that have been taken and describe the progress in achieving predetermined goals. The evaluation used is the "SOAP" format. This evaluation is also intended as nursing plan feedback to assess and improve the quality of nursing services by comparing the results with predetermined standards. For this reason, the success of client care provided has referred to 5 outcome criteria in the plan, all of which have been achieved after taking nursing action for 3 meetings, so it can be concluded that the nursing problem of ineffective airway

clearance in Baby. A can be resolved because during the treatment period the client's mother Baby. A is cooperative and can follow the recommendations.

CONCLUSION

The results of this study concluded that in respondent Baby A, the diagnosis of acute respiratory tract infection appears to be ineffective airway clearance nursing problems in its implementation have been carried out in accordance with the established interventions and also the client's condition. Nursing care to overcome client problems can be resolved in accordance with the objectives and outcome criteria that have been set. In the process of conducting this research, there are limitations to research time.

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CONFLICT OF INTEREST

There is no conflict of interest in this article.

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