E-ISSN: 2664-1305
P-ISSN: 2664-1291
www.paediatricnursing.net
IJRPN 2024; 6(2): 184-185
Received: 13-09-2024
Accepted: 16-10-2024

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A study to assess the effectiveness of video assisted teaching program on knowledge regarding strategies of surfactant therapy in preterm baby among staff nurses of paediatric department in selected hospitals at Indore city

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DOI: https://doi.org/10.33545/26641291.2024.v6.i2c.187

Abstract
Preterm babies, born before completing 37 weeks of gestation, face several challenges in their early days of life due to their underdeveloped organs and systems. One significant concern is their immature lungs, which often lack the surfactant necessary to maintain proper lung function. Surfactant therapy is a critical intervention used to provide surfactant to preterm infants, ensuring their lungs can expand fully and effectively exchange oxygen and carbon dioxide. Proper administration of surfactant therapy requires expertise and knowledge among healthcare professionals, particularly staff nurses who play a crucial role in the care of preterm babies. In this study a quantitative evaluative research approach was used and pre-experimental one group pretest-post-test design was used to find out the effectiveness of video assisted teaching program on knowledge regarding strategies of surfactant therapy among staff nurses of paediatric department. The sample consist of 60 staff nurses. They were chosen by convenient purposive sampling technique. The study was conducted in selected hospitals of Indore city. The knowledge gained through the video assisted teaching program was good and significant (Z= -6.761, p=0.001 two tailed) difference between the mean post-test (X_2 = 15.82) and pretest knowledge score (X_1 = 5.60).
Aim: This study aims to assess the effectiveness of video assisted teaching program in improving nurses' knowledge about surfactant therapy strategies. By focusing on staff nurses in the paediatric departments of selected hospitals in Indore city, this research seeks to address these knowledge deficits, ultimately enhancing the quality of care provided to vulnerable preterm infants.

Keywords: Surfactant therapy, Staff Nurses, Video assisted teaching program, Knowledge

Introduction
Pulmonary surfactant is composed of phospholipids, neutral lipids and proteins. Its synthesis begins from 22 weeks of gestation and production increases throughout the gestation. A term neonate has ten times the pool of surfactant compared to preterm neonates with respiratory distress syndrome (RDS). It reduces the surface tension and prevent alveoli from collapsing at end expiration. It also allows re-expansion of terminal airways with lesser force maintaining lung volume and functional residual capacity.
The medical administration of exogenous surfactant is known as surfactant therapy. In this way, the surfactant is usually injected straight into the trachea. When surfactant is administered to premature newborns suffering from respiratory distress syndrome (RDS), oxygenation improves immediately and the requirement for ventilator support is reduced. There is significant decrease in the risk of pneumothorax and neonatal mortality. Prophylactic administration is the term used to describe the rapid postpartum intubation and surfactant delivery to premature newborns who are at high risk of RDS or after initial stabilization with the goal of preventing RDS.

Review of Literature: Gianluca Dini *et al* (2024) [11], Conducted a retrospective study for INSURE technique versus less invasive surfactant administration (LISA) in preterm infants. This study compared the need for mechanical ventilation and intubation following surfactant

treatment in premature infants with respiratory distress syndrome (RDS) treated with INSURE versus LISA. In this method there are 36 neonates admitted to the neonatal intensive care unit of the "Santa Maria" Hospital of Terni between 2016 and 2023 were included in this retrospective registry-based cohort analysis. The requirement for mechanical ventilation and intubation within the first 72 hours of life was the primary outcome, whereas significant morbidities and premature deaths in neonates were the secondary outcomes. According to the study's findings, there were 13 babies in the LISA group and 23 in the INSURE group. There were no discernible differences between the two groups' demographic features. In the first 72 hours of life, both groups required mechanical ventilation similarly (p>0.99). The morbidities did not differ much. The study concluded that When treating RDS in preterm newborns, LISA and INSURE are equally effective surfactant administration techniques.

Methodology

In this study a quantitative evaluative research approach was used and pre-experimental one group pretest-post-test design was used to find out the effectiveness of video assisted teaching program on knowledge regarding strategies of surfactant therapy among staff nurses of paediatric department.

The sample consist of 60 staff nurses. They were chosen by convenient purposive sampling technique. The study was conducted in selected hospitals of Indore city. The data was collected prior and after the video assisted teaching program through knowledge questionnaires.

Results

The data was analysed through the descriptive and inferential statistics. The knowledge gained through the video assisted teaching program was good and significant (Z= -6.761, p=0.001 two tailed) difference between the mean post-test (X_2 = 15.82) and pretest knowledge score (X_1 = 5.60). There was significant association between pre-test knowledge score with three demographic variables that is gender, current working ward of pediatric department and how many times assisted during surfactant administration.

Conclusion

The video-assisted teaching program proved to be an effective tool for increasing knowledge among staff nurses regarding surfactant therapy. It highlights the need for continuous professional development and the integration of modern teaching techniques in nursing curriculum to ensure high standards of care in paediatric departments. Future studies could explore the long-term impact of such interventions on clinical practice and patient outcomes.

Recommendations

The study's conclusions have led to the following recommendations being put forth:

1. The similar study might be repeated on a large number of subjects there by findings can be generalized for staff nurses.
2. A similar study may be repeated with experimental and control group for more generalization of finding.
3. Similar kind of study can be under taken in different setting.

Research may be done to assess an information booklet's efficacy

Conflict of Interest

Not available.

Financial Support

Not available.

References

1. Singh M. Medical emergency in children. 6th ed. New Delhi: CBS Publishers and Distributors Pvt Ltd; 2020.
2. Premaletha T. Practical paediatric nursing. 1st ed. Hyderabad: Paras Medical Publishers; c2021.
3. Basvanthappa BT. Nursing research. 2nd ed. New Delhi: Jaypee Brothers Medical Publication; c2015.
4. Ghai OP, Gupta P, Paul VK. Essentials of pediatrics. 6th ed. New Delhi: CBS Publishers & Distributors; c2005.
5. Hockenberg JM. Wong's essentials of pediatric nursing. 7th ed. Missouri: Elsevier Publications;c 2007.
6. Kothari CR. Research methodology: methods & techniques. 2nd ed. New Delhi: New Age International Publication; c2010.
7. Kumar SA. Manual of pediatric practice. 2nd ed. Hyderabad: Paras Publications; c2008.
8. Yadav M. Child health nursing. 1st ed. India: Pevee Publications; c2011.
9. Marlow. Textbook of pediatric nursing. 6th ed. Philadelphia: W.B. Saunders Company; c2008.
10. Parker ME. Nursing theories & nursing practice. 2nd ed. Philadelphia: F.A. Davis Company; 2c001.
11. Dini G, Ceccarelli S, Celi F. Strategies for the prevention of bronchopulmonary dysplasia. Frontiers in Pediatrics. 2024 Jul 24;12:1439265.

How to Cite This Article

Kushwaha SS, Pandey P, Swarnkar M. A study to assess the effectiveness of video assisted teaching program on knowledge regarding strategies of surfactant therapy in preterm baby among staff nurses of Paediatric department in selected hospitals at Indore city. International Journal of Research in Paediatric Nursing. 2024;6(2):184-185.