Research Article

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A Descriptive Study to Assess the Knowledge and Practice of Staff Nurses regarding Intravenous Therapy and Its Complications in a Selected Hospital in New Delhi

Abstract

More than 25 million patients have peripheral intravenous catheters placed each year in hospitals. Infusion therapy is believed to account for one-third of all the nosocomial bacteremia and other intravenous therapy-related complications. In this regard, a randomized, prospective, controlled study was conducted to assess the knowledge and practice of staff nurses regarding complications of intravenous therapy. Staff nurses were purposively selected and knowledge regarding intravenous therapy and its complications was assessed using a structured questionnaire and their practice using a structured checklist. The data collected showed that majority of the staff nurses were having average knowledge (83%) and average practice (90%) about the intravenous therapy and the related complications. There was a significant relationship between the knowledge of staff nurses related to intravenous therapy and the complications and the practice followed by them. Furthermore, it was found that although their knowledge was above average yet there were only few staff nurses (3%) showing above average performance. It was also found that about (7%) staff nurses were not able to perform correctly during the administration of intravenous medication and were categorized as below average. This study concluded that the knowledge regarding intravenous therapy and its related complications should be improved among staff nurses by incorporating various in service education and induction classes. For better results in relation to practice of intravenous therapy and reduction in complications regular supervision of practice should be conducted.

Keywords: Intravenous therapy, Complications, Knowledge and practice.

Introduction

Many adult patients in hospitals need intravenous fluid therapy to prevent or correct problems with their fluid and/or electrolyte status. This may be because they cannot meet their normal needs through oral or enteral route or because they have unusual fluid and/or electrolyte deficits or demands caused by illness or injury.[1] According to the clinical guidelines on methods, evidence and recommendation commissioned by the National Institute for Health and Care Excellence, May 2013, a significant number of hospitalized patients were dying as a result of the infusion of too much or too little fluid. In addition to the problems above, there is also considerable debate among experts about the best IV fluids to use, particularly for more seriously ill or injured patients.[2]

Carson et al. reported that the percentage of the population older than 65 years is predicted to increase problem in establishing IV access, than any other age group from 13% in 2010 to 19.3% by 2030 and to 20.2% by 2050. As the population grows

older, it becomes more likely that the population will develop health conditions requiring IV injections and cannula insertions, making venous access increasingly difficult with each successive hospitalization.[3] They also stated that the most frequent complication of peripheral intravenous infusion is phlebitis, which may occur at rates as high as 50% or even as high as 75% in patients with infectious diseases; however, the incidence rate in patients who do not have diabetes, burns or need for urgent catheter insertion is approximately 20%. A number of risk factors have been implicated in the development of phlebitis. Patients who are female or who have poor-quality peripheral veins, insertion in the lower extremity, or the presence of underlying medical conditions, including cancer and immunodeficiency, are at increased risk for phlebitis.[3]

The *Encyclopedia of Surgery* online 2012 defines aseptic technique as a set of practices and procedures performed under carefully controlled conditions with the goal of minimizing contamination by pathogens.[5] However, the fact that there is a correlation between the practice of aseptic techniques and rise in hospital infection rates has prompted for more evidence-based practice about the procedure.[4] To bring about a difference, a descriptive study was conducted to assess the knowledge and practice of staff nurses regarding intravenous therapy and its complications in a selected hospital of New Delhi, with the objective to assess the knowledge and practice of staff nurses regarding intravenous therapy and its complications.

Materials and Methods

A formal administrative approval was obtained from the competent authority to conduct the final study. The final study was conducted in Hakeem Abdul Hameed Centenary Hospital. A quantitative research approach with descriptive survey research design was used in the study. Data was collected from 30 staff nurses working at in-patient department of Hakeem Abdul Hameed Centenary Hospital, New Delhi. The sample was purposively selected for the study. The purpose of the study was explained to them after obtaining willingness to participate in the study. A structured knowledge questionnaire to assess the knowledge of staff nurses and a structured observation checklist to assess the practice of staff nurses about the IV therapy were developed, validated and administered on the selected sample. The data thus obtained was analyzed using descriptive statistics.

Results

The data collected showed that the maximum number of subjects (73%) were in the age group of 22–26 years of age. On the basis of gender, majority (87%) of the sample subjects were female. With regard to professional qualification, most (57%) of the subjects had done B.Sc. in Nursing and 40% had undergone Diploma in General Nursing and Midwifery and only 3% subjects had done Post-Basic Nursing. In relation to professional experience, maximum (83%) numbers of subjects were having clinical experience of 0–5 years.

Based on the participation in in-service training programs, more than half of the subjects (63%) had undergone in-service training and (37%) had not undergone any in-service training program on intravenous catheter care. With regard to knowledge score, out of 30 sample subjects, 83% had average knowledge, 14% had above average knowledge, while only 3% had below average knowledge. With regard to practice scores, out of 30 sample subjects 90% had average practice, 3% had above average practice and 7% had below average practice (Fig. 1).

Conclusion

Administration of IV therapy is an inevitable area of nursing practice. The variability in practice and knowledge in this regard among nurses is an area of concern. Therefore, to reduce the morbidity related to such an indispensable element of nursing care, development of a uniform code of practice is essential. It depends upon how the staff nurse perceives and practices the intravenous therapy. It is essential for nurses to understand the factors causing IV complications. The present study suggested that healthcare organizations should continue to develop and support in-service education regarding intravenous therapy and management of its complications. Various data bases can guide the management to plan educational programs such as in-service educational programs, conferences, individual conference, and regular supervision which would help to minimize IV therapy-related complications among staff nurses working in-service and student nurses in academic side.

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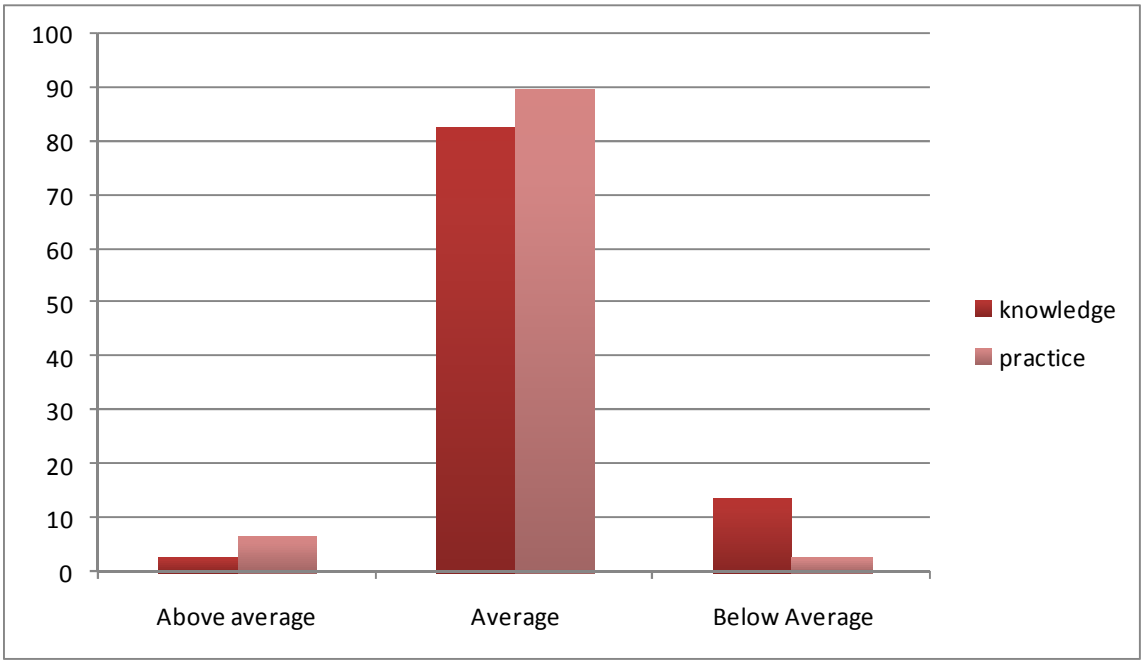

Figure 1.A Multiple Cylinder Bar Diagram Showing the Percentage Distribution of Sample Subjects according to Their Knowledge and Practice

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Conflict of Interest: None

References

1. Soifer NE, Boizak S, Edlin BR et al. Prevention of peripheral venous catheter complications with SN intravenous therapy team: A randomized controlled trail. *Arch Intern Med* 1998 Mar 9; 158(5): 473-77.
2. NICE guideline draft for consultation: Intravenous fluid therapy in adults in hospitals. May 2013: 1-30.
3. Carson D, Dychter SS, David GA et al. Intravenous therapy: A review of complications and economic considerations of peripheral access. *Journal of Infusion Nursing* April 2012; 35(2): 84-91.
4. Paul CS. Developing self-directed training for intravenous cannulation. *Nursing Times* 2002.
5. Aseptic techniques [internet]. 2012. Available from: http://www.surgeryencyclopedia.com/A-Ce/Aseptic-Technique.html

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