

Knowledge and Practice of Neonatal Tube Feeding in Nurses

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Tube feeding is an integral part of patient care in neonatal intensive care units (1). Although the

type and volume of tube feed is calculated by the treating physician, it is the nursing personnel who are directly concerned with the technique of its administration. As very little time is devoted for teaching neonatal care in Nursing Schools, the art of tube feeding is often learnt by practice of 'trial and error'. An in-service training course was conducted in our hospital to improve the neonatal Nursing Care Practices. The present study assesses the impact of this training course on knowledge and practice of Nurses regarding tube feeding in newborns.

Material and Methods

A three day in service training course on neonatal care was conducted for Nurses by the Department of Pediatrics, GTB Hospital. The course included lectures and live demonstrations on nasogastric feeding in neonates. Thirty Nurses working in GTB Hospital attended the course. All these were A grade diploma holder staff Nurses. Their length of service varied from six months to five years. Twenty five of these Nurses, who could be contacted a month later, constituted the study group and were administered a pre planned questionnaire. The same questionnaire was also administered to 31

other Nurses who had not attended the in-service training course and served as control. The duration of service of

on practice. The questions were on indications of tube feed, knowledge and practices about the tube, preparation of feed, method of feeding, pre feed and post feed precautions and non nutritive sucking. For each correct answer, a score of 1 was awarded. Total of correct answers for knowledge and practices were calculated separately in each subject.

Nurses in the study and control groups were further divided into two groups each, on basis of having or not worked in NICU. These four groups were compared with each other with regard to correct knowledge and practices. The statistical analysis was carried out using SPSS software.

Nurses in this group was comparable to that of the study group.

The questionnaire included twenty questions on knowledge and fourteen

The tests used for comparison included student's test, analysis of variance (anova) and Tukey's test for two factor anova.

A pre planned questionnaire regarding knowledge and practices of neonatal tube feeding was self administered to 56 Nurses. Twenty five of them had attended the in-service training course on neonatal care conducted by the Department of Pediatrics, GTB Hospital. Nurses who attended the in-service training course were found to have better knowledge on all aspects of tube feeding. The in-service course was found to be more beneficial for nurses who had worked in a neonatal unit in terms of both knowledge and practice. Authors recommend that such refresher courses be organized periodically for Neonatal Nursing staffs to ensure improved care and survival.

Table 1 : Knowledge and Practice of Tube Feed in Nurses

Parameters Assessed	KNOWLEDGE			PRACTICE		
	No. of Ques.	Correct Answers		No. of Ques.	Correct Answers	
		Study (n=25)	Control (n=31)		Study (n=25)	Control (n=31)
Indications	3	2.6±0.6**	1.5±0.8	-	-	-
Tube Use	4	3.3±0.7**	2.2±0.9	3	2.3±0.5	2.1±0.4
Pre-feed -						
Precautions	5	4.0±1.0**	2.6±0.9	3	2.8±0.4	2.0±0.6
Method of Feeding	3	2.7±0.5**	1.97±0.9	2	0.4±0.7	0.6±0.6
Post-Feed -						
Precautions	4	3.8±0.4**	3.1±0.8	5	3.7±1.0	3.4±0.9
Non-Nutritive -						
Sucking	1	0.6±0.5*	0.3±0.5	1	0.5±0.5	0.4±0.5

* p<0.05 ** p<0.005 (study group compared with controls)

Authors : Working at Dept. of Pediatrics, University College of Medical Sciences & GTB Hospital, New Delhi (at the time of writing this article).

Results

Knowledge on all aspects of tube feeding was significantly better in the study group while no difference was observed between the practices of two groups (Table-1).

Interesting observations were made when this data was analyzed with respect to working place of Nurses. Nurses having worked in a neonatal unit benefited

vice training course was to incorporate useful knowledge and skills in day to day working of Nurses regarding tube feeding of neonates. Such courses have been recommended earlier (4,5).

Education brings about desired changes in the study group making it more receptive to acquiring newer knowledge (6). The same was observed in the present study where participant Nurses were found to be having much better knowl-

practical exposure, a change in attitude and above all aptitude for a change.

Interestingly, the training course helped in improving the practices of only those Nurses who had worked in a neonatal unit. This training course, thus was much more useful to Nurses who were directly involved with the art of tube feeding at sometime or other.

To conclude, the authors recommend that refresher courses for Nurses

working in a neonatal unit be conducted periodically in order to motivate and persuade people with less favourable attitude to take a more positive view of the subject and to ensure improved neonatal care.

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Table 2 : Mean Scores of Knowledge and Practices of Tube Feeding in Nurses

Component Tested	Worked in NICU(B)	Attended Training Course (A)		Total Score(n)
		YES (n)	NO(n)	
* Knowledge	Yes	18.4+1.2(12)	12.3+2.0(15)	15.0+3.5(27)
	No	15.5+2.3(13)	11.1+2.5(16)	13.1+3.3(29)
	Total	16.9+2.3(25)	11.7+2.3(31)	-
** Practice	Yes	10.0+1.5(12)	9.0+1.8(15)	9.4+1.7(27)
	No	9.5+1.8(13)	8.9+1.4(16)	9.2+1.6(29)
	Total	9.7+1.6(25)	8.97+1.6(31)	-
*(i) Anova done for factors A and B. Main effects of factor A($p < 0.001$) and factor B($p < 0.005$) are significant. (ii) Tukey's test - 2 factor anova done. All differences are significant at $p < 0.05$				
** (i) Anova done for factors A and B. Main effects of factor A and factor B are not significant. (ii) Tukey's test-2 factor anova done. Only [B + Yes $\rightarrow$ A (Yes, No)] is significant at $p < 0.05$.				

much more than those who had no experience in working with neonates, in terms of knowledge. Amongst the Nurses who had worked in a neonatal unit, those having attended the training course were having better correct practices as compared to those who did not attend the training course (Table-2).

Discussion

Tube feeding refers to delivery of nutrients directly into the gastro intestinal tract. Nurses need to know the indications of tube feeding, formula and tube characteristics, tube location and the associated precautions correctly so that they can provide the safest and most appropriate mode of nutritional support for the neonates (2,3). The prime objective of conducting an in-ser-

edge in all aspects of tube feeding as compared to their counterparts who did not attend the training course. However, such a trend was not observed so far as practices were concerned, because improving the practices involve several factors, education being only one of them. As we had not incorporated any questions for non-observance of correct practices in the questionnaire, it was difficult to comment on the reasons as perceived by the Nurses, for poor practices even after the training course. Lindman (7) has suggested shortage of staff, over crowding and increased time devoted to indirect patient care activities as some of the constraints in observing the correct practices. It may be further emphasized that practices and skills can not be improved by training alone until and unless associated with continuous