KNOWLEDGE OF NURSING PROFESSIONALS ABOUT THE CARE TO DYSPHAGIC PATIENTS IN INTENSIVE CARE UNITS

Conhecimento da enfermagem sobre cuidados a pacientes disfágicos internados em unidade de terapia intensiva

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ABSTRACT

Purpose: to evaluate the knowledge about the care with dysphagia patients from the nurses who work in intensive care units, in order to evaluate their knowledge about dysphagia, and its implications on intensive care unit patients with this clinical complication. **Methods:** a quantitative, descriptive and comparative study between two groups of nurses (intensive care and other sectors) working in a University Hospital, who answered a structured questionnaire with questions about dysphagia which was statistically analyzed by Fischer's test and the Differences in Proportion. **Results:** professionals in both groups had an adequate knowledge about the definition and complications of dysphagia, but they did not know about the stages, causes and specific care related to nutrition, medication and hygiene in cases of dysphagia, the self-assessment reported lack of training in conducting some procedures to patients with dysphagia. **Conclusions:** the assessment found that there is a partial theoretical and practical knowledge about nursing care to patients with dysphagia, demonstrating the need for continuing education, especially in intensive care. We suggest the creation of the nursing specialization course in dysphagia.

KEYWORDS: Dysphagia; Nursing; Intensive Care Units

INTRODUCTION

Intensive Units (ICU) are aimed at treating patients in serious or critical condition and require uninterrupted medical and nursing attention, with specific equipment, and skilled human resources who have access to other technologies for diagnosis and therapy.[1]

In intensive care, supportive therapies for the management of organ failure are used. The occurrence of invasive procedures is common for the establishment of these therapies in ICU patients that are typically affected by respiratory, cardiovascular, neurological, and other problems. Tracheal intubation is a medical procedure that stands out, having the goal of keeping the patient alive, but it may be associated with some potentially serious complications such as lesions to the tongue, palate, mouth, uvula, esophagus, larynx, trachea, among other areas, which can affect the swallowing process, causing oropharyngeal dysphagia.[2]

Dysphagia can bring significant complications to the clinical condition of a patient like malnutrition, pulmonary complications, and dehydration.[3] Aspiration pneumonia has a strong association with dysphagia and leads to serious respiratory complications. Studies indicate that patients who aspire have a mortality rate three times higher than patients who do not aspire, and there is a vicious circle among dysphagia, malnutrition, aspiration, and aspiration pneumonia[4]. Critical ICU patients are at risk for aspiration and aspiration pneumonia, and the biggest cause in victims' developing aspiration pneumonia is dysphagia.[5]

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Due to the complexity of diagnosis and treatment of swallowing disorders, a trend toward interdisciplinary care with regard to dysphagia can be seen in scientific publications.[3] Nurses, technicians, and nursing assistants have an important role in the care of patients with dysphagia, as they are the professionals that are present bedside twenty four hours per day, and especially at mealtimes. These professionals may observe the signs and symptoms of dysphagia and through the identification, assessment, and early establishment of nursing interventions, they can help in the treatment and prevention of complications associated with this condition. A study by American nurses underscores the benefits of a Clinical Nurse Dysphagia Specialist to facilitate a consistent approach and oversee nursing care in dysphagia.[6]

Thus, this study aims to assess the knowledge about caring for patients with dysphagia in the nursing staff that works in an Intensive Care Unit, in order to obtain a profile of nursing knowledge about dysphagia and its implications for the care of hospitalized patients in the ICU presenting this clinical complication.

METHODS

This was a quantitative, descriptive, and comparative study between two groups of nurses who work in an Adult Intensive Therapy Unit (Group A) and other professionals working in other hospital departments (Group B), in a University Hospital located in Curitiba, Brazil.

From the total of 120 nursing professionals that make up the nursing staff working in the hospital's adult intensive care unit, 94 made up sample for Group A (24 nurses, 22 nursing techs, and 48 nursing assistants) and they work in three shifts in the ICU. The sample for Group B consisted of 93 professionals (23 nurses, 26 nursing techs, and 44 nursing assistants) from inpatient units randomly selected from other departments of the same institution, and who receive patients transferred from the ICU after clinical improvement.

The criteria for inclusion in the sample were nurses with experience in the adult ICU of at least one year, a diploma in nursing, completion of a technical nursing or nursing assistant course with a minimum of 1,100 hours of training, female and male above 18 years of age. Excluded from the study were nursing professionals with less than one year working in nursing or who refused to participate in the study.

Data collection occurred during the months of October and December 2009 using a questionnaire that was prepared by the researchers (Figure 1). The questionnaire was self-explanatory and had three domains: 1- Personal profile; 2- Theoretical knowledge about dysphagia that included 13 closed-ended questions about academic training and continuing education received about the subject; 3- Professional Practice, with 18 questions on self-assessment to provide nursing care to dysphagic patients. A pilot test with this instrument for data collection with five individuals to identify possible difficulties in completing the study was done, but based on the responses, it was not necessary to perform modifications.

INSTRUMENT FOR DATA COLLECTION FOR MASTER THESIS IN COMMUNICATION DISORDERS:

IDENTIFICATION

1) Sex / Age
[ ] Male [ ] Female _____ years old

2) What is your job category ?
[ ] Nursing assistant
[ ] Nursing technician
[ ] Nurse

3) How long have you been in the nursing field?
[ ] 1 year [ ] 1-3 years [ ] 3-5 years [ ] + 5 years

ISSUES OF KNOWLEDGE

1) During your academic training (course), were you guided on nursing care for patients with dysphagia?
A. [ ] Yes, in the nursing assistant course
B. [ ] Yes, in the technical nursing course
C. [ ] Yes, the nursing (RN) course
D. [ ] No
E. [ ] Other

2) During your professional life, have you already received some guidance in relation to nursing care for patients with dysphagia?
A. [ ] Yes B. [ ] No

3) Are you aware of COFEN (Federal Nursing Council) resolution 277/03 - Rules and Procedures of the Standards for Nursing Team in Nutritional Therapy?
A. [ ] Yes B. [ ] No

4) What are the phases of swallowing?
A. [ ] Oral, anticipatory, pharyngeal, esophageal
B. [ ] Oral, anticipatory, esophageal, pharyngeal
C. [ ] Anticipatory, oral, pharyngeal, esophageal
D. [ ] Anticipatory, oral, esophageal, pharyngeal
E. [ ] Do not know

5) What is dysphagia?
A. [ ] Disease of the digestive tract
B. [ ] Symptom of an underlying disease that rushes the digestive tract
C. [ ] Pain in the digestive tract
D. [ ] Do not know

6) What are the causes of dysphagia?
A. [ ] Mechanical, neurogenic, genetic
B. [ ] Neurogenic, psychogenic, genetic
C. [ ] Psychogenic, mechanical, neurogenic
D. [ ] Do not know

7) What are the main complications of dysphagia?
A. [ ] Malnutrition, dehydration, increased laryngeal sensitivity
B. [ ] Dehydration, malnutrition, aspiration
C. [ ] Malnutrition, aspiration, increased sensitivity of the larynx
D. [ ] Do not know

8) Which of the symptoms listed below are found in dysphagic patients?
(select one or more alternatives)
A. [ ] Loss of saliva or food by mouth
B. [ ] Difficulty in chewing
C. [ ] Change in vocal behavior
D. [ ] Difficulty initiating swallowing
E. [ ] Nasal reflux
F. [ ] Cough
G. [ ] Choking and / or throat clearing
H. [ ] Feed time increased

9) Which route(s) of nutrition are suggested for the dysphagic patient?
(select one or more alternatives)
A. [ ] Oral
B. [ ] Oro/ nasogastric tube without introducer
C. [ ] Nasoenteral tube with guide wire
D. [ ] Peripheral central catheter for parenteral
E. [ ] Parenteral central intravenous catheter
F. [ ] Gastrostomy
G. [ ] Jejunostomy
H. [ ] Do not know

10) Which professional privately accesses the gastro-intestinal tract (via tube with guide wire and transpyloric) and / or the central venous catheter peripherally inserted?
A. [ ] Nutritionist
B. [ ] Nurse
C. [ ] Nursing technician
D. [ ] Nursing assistant
E. [ ] Do not know

11) Which professional rehabilitates patients who experience difficulty feeding?
A. [ ] Medical
B. [ ] Physiotherapist
C. [ ] Nurse
D. [ ] Nutritionist
E. [ ] Audiologist/ Speech-Language Pathologist
F. [ ] Do not know

12) Which of nursing actions cited below relates to Nutrition Therapy for NG / Gastrostomy / Jejunostomy tubes?
(select one or more alternatives)
A. [ ] Guide the patient and family about nutritional therapy
B. [ ] Prepare material, the patient and environment for the insertion of the access road
C. [ ] Maintain and route of administration permeability
D. [ ] Receive the solution and ensure their conservation until full administration
E. [ ] Evaluate and ensure the administration of the solution by observing the information on the label confronting them with the prescription and the principles of aseptic
F. [ ] Ensure that the exchange of the tube, catheter, equipment, and dressings are carried out according to pre-established procedures with the SCIH and the Nutritional Therapy multidisciplinary team
G. [ ] Ensure clear and accurate record of information relating to administration and patient outcomes (vital signs, anthropometric data, digestive tolerance, glucose, water balance, etc.)
H. [ ] Detect, record and report the multidisciplinary team / physician responsible for patient, the complications of any kind

13) When administering medications orally release the long -term dysphagia in these patients: (select one or more alternatives)
A. [ ] May be cut
B. [ ] Can be crushed / broken
C. [ ] Should not be crushed / broken
D. [ ] Do not know

ISSUES OF PROFESSIONAL PRACTICE

1) In providing nursing care to patients with dysphagia, you feel?
A. [ ] Well prepared
B. [ ] Unprepared
C. [ ] I care for the patient, but insecurely
D. [ ] Other

2) What position do you keep the patient during and after feeding?
(select one or more alternatives)
A. [ ] Lying less than 30° in bed
B. [ ] Tilted 45° up in bed
C. [ ] Tilted 60° up in bed
D. [ ] Sitting with the neck slightly flexed
E. [ ] Do not know

3) How many times a day you perform oral hygiene on patients?
   A. [ ] As
   B. [ ] One to three times
   C. [ ] Four to six times
   D. [ ] Never

4) In patients with cannula endotracheal intubation or tracheostomy do you maintain the cuff inflated during Nutritional Therapy?
   A. [ ] Yes
   B. [ ] Sometimes
   C. [ ] No

5) The air you introduce by a syringe to inflate the cuff is maintained at what pressure?
   A. [ ] 35 - 40 mmHg
   B. [ ] 30 - 35 mmHg
   C. [ ] 25 - 30 mmHg
   D. [ ] Below 25 mmHg
   E. [ ] Do not know

6) Do patients you feed orally often choke?
   A. [ ] Yes
   B. [ ] Sometimes
   C. [ ] No
   D. [ ] Do not know

7) What kind of consistency of food offered orally to patients causes more choking?
   A. [ ] Solid
   B. [ ] Semi -solid
   C. [ ] Thick pasty
   D. [ ] Thin pasty
   E. [ ] Liquid
   F. [ ] Do not know

8) What is the spoon used for feeding dysphagic patients?
   A. [ ] Coffee Spoon
   B. [ ] Teaspoon
   C. [ ] Tablespoon
   D. [ ] Other

9) When do you offer liquids?
   A. [ ] Before offering food
   B. [ ] During the offering of food
   C. [ ] After offering food
   D. [ ] Do not offer

10) How would you offer liquids?
   A. [ ] With cup
   B. [ ] With straw
   C. [ ] With spoon
   D. [ ] With syringe
   E. [ ] Other

11) Do you observe food residue in the mouth after the patient swallows?
   A. [ ] Yes
   B. [ ] No
   C. [ ] Sometimes

12) For the passage of NG tube, the measurement you use is:
   A. [ ] Tip of nose to earlobe and then to the xiphoid process
   B. [ ] Earlobe to the tip of the nose and then xiphoid
   C. [ ] Do not know

13) Which check for the correct positioning of the NG tube do you use? (select one or more alternatives)
A. [ ] Aspiration gastric contents
B. [ ] Instilling 10 ml or more air at the same time that auscultation with stethoscope on the stomach area
C. [ ] Put distal end of the probe immersed in water
D. [ ] Refer to radiological evaluation
E. [ ] Do not know

14) In their clinical practice, the use of NG / Gastrostomy / Jejunostomy tubes is:
A. [ ] Exclusively for the use of gastric / enteral nutrition
B. [ ] Is not unique to nutrition and can be used for medicinal and other solutions
C. [ ] Do not know

15) When you administer medication to a patient through an alternative route of nutrition (NG tube) do you consider: (select one or more alternatives)
A. [ ] The interaction with food
B. [ ] The interaction with the tube
C. [ ] Mixture with food
D. [ ] Do not know

16) How do you manage and control the infusion of nutrient solutions?
(select one or more alternatives)
A. [ ] Using a large syringe (20 ml)
B. [ ] Calculating dripping with serum catheter
C. [ ] Programming drip vs. volume in the infusion pump
D. [ ] Offering nutritional supplement at the prescribed times
E. [ ] Recording the beginning and end of the infusion
F. [ ] Do not know

17) When administering parenteral solution you use:
A. [ ] Route of administration solely for parenteral nutrition
B. [ ] Route of administration of concomitant infusion of parenteral nutrition for other solutions, drugs or nutrients
C. [ ] Do not know

18) You monitor the patient noting the presence of:
(select one or more alternatives)
A. [ ] Vomiting, diarrhea, constipation
B. [ ] Abdominal distention and stasis
C. [ ] Oropharyngeal or gastric contents on aspiration of pulmonary secretions
D. [ ] Change in blood glucose

Figure 1 - Questionnaire applied to nursing professionals

Upon completion of data collection, the data were stored and processed using the SPHINX® program. Analyses were performed from simple tables and cross referenced. Next, based on the data, the descriptive examination for all nurses, without stratification by occupational category, was carried out considering that the knowledge of the pathology under study is essential for all who work in nursing and in providing care to dysphagic patients in the ICU environment.

The project was approved by the Ethics Committee (CEP) of HC/ UFPR under registration number 1987.154/2009-07, according to Resolution 196/96 (CNS). All participants in the study were consulted and all signed an informed consent waiver.

The statistical tests used were the Fisher test and the Ratio Test. In all tests, the significance level was set at 0.05 (5%).

RESULTS

In relation to the professional profile, there was a predominance of females, 87.23%, among the professionals in Group A and 81.72% among professionals in Group B. The professionals mostly had work experience in nursing higher than 5 years both in Group A (85.11%) and in Group B (91.40%).

Regarding theoretical knowledge about dysphagia, the subjects reported having received guidance on the care of patients with dysphagia during training – 67.02% of the professionals in Group A and 59.14% in Group B. With respect to continuing education in the care of patients with dysphagia, 59.57% of the professionals in Group A and 55.91% of Group B said they had received on-the-job training.

Asked about COFEN resolution 277/03 by the Federal Nursing Council, which regulates the procedures for parenteral and enteral nutrition therapy, necessary for the maintenance or recovery of the nutritional status of hospitalized patients, only 23.40% of nursing professionals in Group A and 18.28% of professionals in Group B knew about the resolution. This lack of knowledge can lead to deviations in technical procedures for practices related to this nursing topic thereby jeopardizing the success of therapy and patient safety.

Table 1 shows the results regarding the swallowing phases and etiological factors for dysphagia, and indicate that most industry professionals are unaware of those phases and factors.

Table 1 - Distribution of responses from professionals on the knowledge of the phases of swallowing, concept, causes, and major complications of dysphagia

RESULTADOS	Group A		Group B		P
	n	%	n	%	
PHASES					
Correct	44	46.81	49	52.69	0.4214
Incorrect	50	53.19	44	47.31	
CONCEPT					
Correct	75	79.79	68	73.12	0.2824
Incorrect	19	20.21	25	26.88	
CAUSES					
Correct	33	35.11	36	38.71	0.6097
Incorrect	61	64.89	57	61.29	
COMPLICATIONS					
Correct	67	71.28	59	63.44	0.2531
Incorrect	27	28.72	34	36.56	

Difference of proportions test (significance level of 0.05)

For signs and symptoms found in dysphagic patients, the responses of the health professionals showed that both groups had difficulties in identification. Regarding the process of nutrition for dysphagic patients, the proportion of respondents who chose oral feeding is significantly higher in Group A (24.47%) compared to Group B (11.83%).

On the results for the knowledge of the professional responsible for access to the gastrointestinal tract (stomach or placement of a nasogastric tube and placement of peripherally inserted central catheter), 90.43% of respondents in Group A and 95.70% in Group B confirmed that this should be a skill for nurses. In responses about which professional is responsible for the rehabilitation of patients with swallowing disorders the error rate was 59.57% in Group A and 62.37% in Group B, showing a lack of knowledge about the role of the speech-language pathologist.

As for practical knowledge of the patient's dysphagia, both Group A's and Group B's answers show that they know how to develop care for patients undergoing nutritional therapy.

In Table 2, it was found that, regarding care with medication, both groups are unaware of pharmacological properties and generalized practice in the administration of the medication.

Table 2 - Distribution of responses from professionals regarding the administration of medications orally, and their release over the long term in patients with difficulty swallowing

ADMINISTRATION OF MEDICATION	Group A		Group B		P
	n	%	n	%	
May be cut up	10	10.64	7	7.53	0.4605
May be crushed	65	69.15	67	72.04	0.665
Should not be crushed	14	14.89	18	19.35	0.4191
Don't know	14	14.89	7	7.53	0.1127

Difference of proportions test (significance level of 0.05)

According to the self-assessment of the researched nursing staff on the care of dysphagic patients, the staff considers themselves to be unprepared. Professional nurses working in the ICU have knowledge about the most appropriate posture of the patient at the time of feeding.

Table 3 shows that care related to the realization of the patients oral hygiene is not followed as recommended. Regarding the maintenance of the inflated cuff during feeding, the result shows that the percentage of success is significantly higher in the ICU group, but we observed in the responses of the professionals that both groups are unaware of the correct air pressure to which the cannula cuff must be adjusted.

Table 3 - Distribution of responses from professionals in relation to the number of times they perform oral hygiene, on the permanence of the inflated cuff and the air pressure to be adjusted to inflate the cuff of the tube intubation or tracheotomy during nutritional therapy

RESULT	Group A		Group B		P
	n	%	n	%	
ORAL HYGENE					
Correct	17	18.09	23	24.73	0.2678
Incorrect	77	81.91	70	75.27	
CUFF INFLATED					
Correct	87	92.55	74	79.57	**0.,0103**
Incorrect	7	7.45	19	20.43	
CUFF PRESSURE					
Correct	33	35.11	31	33.33	0.7983
Incorrect	61	64.89	62	66.67	

Difference of proportions test (significance level of 0.05)

Questioned on the professional's identification of the time that the patient presents a problem when swallowing food, it was shown that there was a perception error for both groups on the presence of choking and food residue in the oral cavity. Regarding the perception of the nursing team on the consistency of food that causes choking more frequently in patients it was found that solid food was first followed by liquids, but the difference was not significant between the groups.

In Table 4, it is noted in the responses of professionals in Group A and B that over 50% erred on the use of the technique for the passage of a nasogastric/ nasoenteric tube. Regarding how to use it, Group A got the correct answer with 53.19% accuracy compared to 48.39% in Group B. There was no significant difference between the groups.

Table 4 - Distribution of responses from professionals on the measurement used in the passage of NG tubes and the manner of use of NG / gastrostomy / jejunostomy tubes

RESULT	Group A		Group B		P
	n	%	n	%	
MEASURING TECHNIQUE					
Correct	42	44.68	33	35.48	0.1995
Incorrect	52	55.32	60	64.52	
MANNER OF USE					
Correct	50	53.19	45	48.39	0.5111
Incorrect	44	46.81	48	51.61	

Difference of proportions test (significance level of 0.05)

In Table 5 we can see as to the practical knowledge of the verification tests of the correct positioning of a nasogastric/ nasoenteric (NG) tube which: in aiding in radiological assessment, the proportion of correct answers in Group B 70.97% is significantly higher than in Group A 45.74%; and, in placing the distal end of the probe immersed in water, the proportion of correct answers in Group B was also higher than in Group A.

Table 5 - Distribution of responses from professionals about tests used to check the correct positioning of NG tubes

VERIFICATION TEST	Group A		Group B		P
	n	%	n	%	
Aspiration of gastric contents	81	86.17	81	87.1	0.852
Instillation of 10 ml or more air at the same time of auscultation with stethoscope on the gastric area	91	96.81	85	91.4	0.1176
Place the distal end of the probe immersed in water	54	57.45	66	70.97	0.0554
Refer to radiological evaluation	43	45.74	66	70.97	0.0006
Don't know	1	1.06	1	1.08	-

Difference of proportions test (significance level of 0.05)

It was found that Group A showed greater knowledge, with statistically significant results, concerning the interaction of supply and technical administration of medication via an alternative route of nutrition as well as concerning the supply of nutritional supplements at the prescribed times.

Regarding the technique of using parenteral solutions, professionals in Group A and B answered with no statistical difference between the groups. About the signs and symptoms to be monitored in dysphagic patients by nursing staff, it was observed that Group A has a significantly higher proportion of the response "oropharyngeal or gastric contents on aspiration of pulmonary secretions" than Group B.

DISCUSSION

Analyses of gender and time of practice variations presented results showing that the groups are homogeneous with respect to these areas. No significant differences ($p<0.05$) were found between Group A and Group B in referring to orientation training, professional experience, and knowledge of COFEN resolution 277/037, a disturbing result since it demonstrates that nursing professionals in general, and especially the ICU, are uninformed about the legal aspects of the profession, as well as the standards and procedures of nutritional therapy.

Nutritional therapy is often given to patients in the ICU for therapeutic reasons (postoperative

abdominal surgery, swallowing disorders, comatose states, etc.) as well as diagnostic purposes (upper gastrointestinal bleeding). The nursing staff can contribute to effective assistance in achieving this therapeutic procedure based on protocols that can optimize the management of Nutritional Therapy enabling better delivery of nutrients to critically ill patients, contributing to their recovery.

The results about the phases of swallowing and dysphagia etiological factors indicate that most industry professionals are unaware of them. One can attribute this deficiency to the lack of having the subject of dysphagia in the curricula for training the three categories that comprise nursing.

It was also observed that most of the professional nursing staff for both groups had difficulties in identifying the signs and symptoms of dysphagia. This fact can be explained by a lack of knowledge about the clinical features and mechanisms related to dysphagia, which may suggest the need for training, for example, taught in continuing education courses. This result goes against the literature that stresses the importance of early identification of possible changes in swallowing performed by nursing professionals to help in the treatment and prevention of dysphagia.[6]

The low rate of correct responses about feeding, both groups do not consider the oral pathway as a possible route of feeding for the dysphagic patient, was also noted. One possible reason for this response is that the nursing staff considered that patients who eat orally do not have swallowing disorders. This finding can serve as a warning to the nursing staff that is responsible for the administration of diets on the importance of identifying and evaluating the changes of swallowing, establishing nursing interventions to ensure safe oral nutrition and hydration of patients, thereby preventing laryngeal penetration and aspiration.[6]

As for the lack of knowledge in professionals responsible for rehabilitation of oropharyngeal functions, we believe that exists because they do not know the role of the speech-language pathologist, because they have no contact with each other at the hospital where this study was conducted. This result disagrees with the scientific publications in which the authors refer to the tendency towards interdisciplinary care related to dysphagia, noting that the speech therapist's participation in the care of patients with dysphagia is essential in the patient's reabilitation.[3]

Professionals on the nursing team of the two groups that were studied, when asked about care in nutrition therapy, showed a technical-scientific knowledge regarding this issue. It is essential to standardize nursing care in nutrition therapy for the team to perform their functions, through specialized care while observing the reactions of the patient and acting in the prevention of complications.

In care related to medication, the result showed that the nursing staff is unaware of the medicines' pharmacological properties and use generalized techniques in the administration of the medication, probably due to a limited knowledge about the best practices of drug administration in patients with swallowing difficulties, and/ or errors in the prescription for medication on the proper administration form according to the swallowing difficulties for each patient. The literature suggests that, pharmacologically, many medications are provided in a controlled release format, crushing an oral tablet and opening a capsule can affect bioavailability, resulting in unpredictable serum concentrations.[8] A recent study concluded that the difference between theory related to medication administration by gavage and nurses' beliefs is worrisome, stressing the need to rethink the pharmacological academic training of professional nurses in order to prevent problems related to the administration of medications by tubes.[9]

On the self-assessment of the nursing staff on care for dysphagic patients, the findings are found in the literature[10] on critical thinking for nurses to improve the care and reinforce the need to establish standards of care and programs in continuing education.

Professional nurses working in the ICU have knowledge about the most appropriate posture of the patient at the time of feeding. This care is of utmost importance for a safe food supply for ICU patients who are bedridden most of the time, and in such cases, there is evidence that maintaining an upright position, placing the patient semi-sitting with head elevated during and after feeding, to avoid the flow of food into the larynx, may reduce the risk of aspiration. When initiating oral feeding, several studies support that the ideal safe food supply position is seated at 90° with the patient's neck slightly flexed.[11,12]

It has been shown that oral hygiene care for patients is not followed as recommended in the literature, in that it should be performed every 4 hours, and at a maximum interval of 8 hours. Intra-oral hygiene stands as one of the parts of care that can relieve and prevent aspiration pneumonia or high aspiration, as well as ventilator-associated pneumonia.[13]

An important finding of this study was the result found about cuff maintenance, which is consistent with the jobs of the groups; Group A mainly takes care of intubated and tracheostomy patients and thus know more about the function of the cannula cuff,

which is to seal the airway and prevent aspiration. However it can be seen in the responses of professionals in Groups A and B, that both are unaware of the correct air pressure that must be adjusted in the tube cuff. This result causes concern, especially the rate of error for Group A because endotracheal intubation is a routine procedure in the ICU. It is very important that the intra-cuff pressure be appropriate and remain constant as a prophylactic means of preventing possible complications in tracheal prosthesis balloon pressure.

One can infer that the perception of professionals from both groups about the importance in seeing the presence of choking and food residue in the oral cavity. It is considered as important for the professional to have the knowledge and maintain the proper observation for the provision of safe food, once the patient is fed orally, NG tubes may present a risk of aspiration, either by motor dysfunction of the larynx or the displacement of the tube. As for the food consistency that causes choking more frequently in patients, the result agrees with the literature as it relates to specific variables of swallowing affected by changes in the viscosity of food. The treatment of dysphagia in adults may result in the modification of the texture of food and beverages, liquids must be thickened and solid foods should be divided or crushed. As for food volume, intraoral sensitivity is considered and the temperature of the food should be in accordance with the patient's tolerance in triggering the swallowing reflex.[15]

On the measures used in the passage of NG tubes, and the way a variety of tubes (NG, gastrostomy, and jejunostomy) are used, the results for both groups are considered inadequate, especially for Group A which provides direct care to critical patients and who often perform these procedures. One hypothesis, based on practical experience as a clinical bedside nurse, to justify the high number of errors in measurement technique is that nursing professionals invert the measurement procedure by placing the distal end of the probe in the ear lobe, extending then up to the tip of the nose, and then to the xiphoid process, which measures the length of the tube to be inserted, for up to 2cm.[11]

As for the verification testing of the correct positioning of NG tubes, a hypothesis used to explain this result is the possibility that Group B refers patients for radiological assessment more often, because it has less experience and does not feel as secure in other verification methods that may not be accurate.

With regard to the feeding and medication administration techniques via an alternative route of nutrition, the result indicates that the professionals in Group A, due to the complexity of ICU patients and the provision of various types of medications, need greater professional knowledge about the most appropriate form of management to avoid adverse effects. Regarding the management and control of infusion of nutrient solutions, it can be inferred from the results that Group A sees the most cases of patients with serious difficulty in swallowing making it necessary to provide nutrition through alternative feeding methods, in accordance with the cited literature. In this condition of intense catabolism and the association between nutritional status and lung function, nutritional therapy is required as a treatment, and the preferred route of nutritional support in critically ill patients is enteral.[12]

Another area of caution evaluated, which showed an excellent rate of success of professionals in both groups, was the technique of parenteral solution administration, demonstrating compliance with Best Practices for Parenteral Nutrition (BPANP).[16] Regarding the monitoring of the dysphagic patient's signs and symptoms, results found can be explained by the hypothesis that Group B does not intubate often because this procedure is often performed by Group A due to the number of patients undergoing endotracheal intubation, tracheostomy, and artificial ventilation in the ICU.

CONCLUSIONS

Professionals from both groups showed a partial theoretical and practical knowledge about the proper care to patients with dysphagia. There was, however, better performance on issues relating to professional practice.

With the results, it was shown that investment is needed in continuing education in nursing with a view to fully qualified patient care in the ICU, the need to develop specialization courses in Nursing in Dysphagia, and more studies that provide the construction of new knowledge and attitudes for nursing professionals with regard to the care of the patient with dysphagia.

It is concluded that the care of patients with dysphagia is still a challenge, even in University Hospitals, since it depends on the proper management of care and an interdisciplinary approach involving speech-language pathologists, nurses, and medical experts in the area, among other trained professionals.

RESUMO

Objetivo: avaliar o conhecimento sobre cuidados com pacientes com disfagia pela equipe de enfermagem que atua em Unidade de Terapia Intensiva, visando à obtenção de um perfil de conhecimento da enfermagem sobre disfagia, e suas implicações para o cuidado dos pacientes internados em UTI que apresentam esta complicação clinica. **Métodos:** estudo quantitativo descritivo e comparativo entre dois grupos de profissionais de enfermagem (terapia intensiva e outros setores) que atuam em um Hospital Universitário, que responderam um questionário estruturado com questões sobre disfagia analisadas estatisticamente pelo teste de Fischer e Diferenças de Proporção. **Resultados:** os profissionais dos dois grupos tinham conhecimento adequado sobre definição e complicações da disfagia, mas não sobre as fases, causas e cuidados específicos referentes à nutrição, medicação e higiene nos casos de disfagia; na auto-avaliação referiram pouco preparo na realização de alguns cuidados a pacientes disfágicos. **Conclusões:** a avaliação constatou que existe conhecimento teórico e prático parcial a respeito dos cuidados de enfermagem aos pacientes disfágicos, demonstrando a necessidade de educação permanente, especialmente nas terapias intensivas. Sugere-se criação de curso de especialização de enfermagem em disfagia.

DESCRITORES: Disfagia; Enfermagem; Unidades de Terapia Intensiva

REFERENCES

1. Portaria GM/MS n. 1884 de 11 de novembro de 1994 (BR). Dispõem sobre Normas para Projetos Físicos de Estabelecimentos Assistenciais de Saúde. Diário Oficial da União [periódico na Internet]. 15 dez 1994. [acesso 22 fev 2011]; Disponível em: http://www.cremesp.org.br/library/modulos/legislacao/versao_impressao.php?id=3261

2. Kunigk MRG, Chehter E. Disfagia orofaríngea em pacientes submetidos à entubação orotraqueal. Rev Soc Bras Fonoaudiol. 2007;12(4):287-91.

3. Logemann JA. Oropharyngeal dysphagia and nutritional management. Current Opinion Clin Nutr Metabolic Care. 2007;10:611-4.

4. Oh E, Weintraub N, Dhanani S. Can we prevent aspiration pneumonia in the nursing home? J Am Med Dir Assoc. 2004;5(3):174-99.

5. Marik PE. Aspiration pneumonitis and aspiration pneumonia. N Engl J Med. 2001;344:665-71.

6. Werner, H. The benefits of the dysphagia clinical nurse specialist. Journal of neuroscience nursing. Am Assoc Neurosci Nurses. 2005;37(4):212-5.

7. Resolução COFEN n. 277 de 16 de junho de 2003 (BR). Dispõe sobre a ministração de Nutrição Parenteral e Enteral. Conselho Federal de Enfermagem. 2003 [acesso 22 fev 2011]; Disponível em: http://site.portalcofen.gov.br/node/4313

8. Hanssens Y, Woods D, Alsulaiti A, Adheir F, Al-Meer N, Obaidan N. Improving oral medicine administration in patients with swallowing problems and feeding tubes. Annals Pharmacother. 2006;40:2142-7.

9. Mota MLS, Barbosa IV, Studart RMB, Melo EM, Lima FET, Mariano FA. Evaluation of intensivist-nurses' knowledge concerning medication administration through nasogastric and enteral tubes. Rev. Latino-Am. Enfermagem [periódico na Internet]. 2010 [acesso 22 fev 2011];18(5):888-94. Disponível em: www.eerp.usp.br/rlae.

10. Spezani RS, Lanzelloti RC, Costa Aguiar BG, Santiago LC, Shiratori K. Refletindo sobre a prática e a importância dos cuidados de enfermagem na terapia intensiva. Enferm Global. 2007;11:1-8.

11. Shiramizo SCPL, Mayer SM, Yakabi P. Vias de acesso nutricionais. In: Knobel E. Terapia Intensiva: Enfermagem. São Paulo: Atheneu; 2006.

12. Nunes ALB, Koterba E, Girard V, Alves F. Terapia nutricional no paciente grave. Projeto Diretrizes. Sociedade Brasileira de Nutrição Parenteral e Enteral. Rio de Janeiro; ago 2009.

13. Araújo RJG, Oliveira LCG, Hanna LMO, Corrêa AM, Carvalho LHV, Alvares NCF. Análise de percepções e ações de cuidados bucais realizados por equipes de enfermagem em unidades de tratamento intensivo. Rev Bras Ter Intensiva. 2009;21(1):38-44.

14. Gomes GPLA, Rezende AAB, Almeida JDP, Silva IL, Beresford H. Cuidados de Enfermagem para Pacientes com Tubo Orotraqueal: Avaliação Realizada em Unidade de Terapia Intensiva. Rev Enferm UFPE On Line. 2009;3(4):20-5. [acesso 15 fev 2011]. Disponível em: http://www.ufpe.br/revistaenfermagem/index.php/revista/article/view/88/88

15. Furkim AM, Mattana A. Fisiologia da deglutição orofaríngea. In: Ferreira LP, Befi-Lopes DM, Limonge SCO. Tratado de fonoaudiologia. São Paulo: Rocca; 2004:212-8.

16. Portaria n. 272 de 8 de abril de 1998 (ANVISA). Dispõe sobre o Regulamento Técnico para a Terapia de Nutrição Parenteral. Diário Oficial da União [periódico na Internet]. 23 abr 1998. [acesso 15 fev 2011]. Disponível em: http://www.anvisa.gov.br/legis/portarias/272_98.htm

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