CLINICAL CRITERIA USED BY HEALTH PROFESSIONALS FOR RELEASE ORAL DIET IN HOSPITALIZED ADULTS PATIENTS

Critérios clínicos utilizados por profissionais para liberação de dieta via oral em pacientes adultos hospitalizados

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ABSTRACT

Purpose: integrated action of the multidisciplinary team is essential to success in management of oropharyngeal dysphagia in hospital. However, this is not always a reality of multidisciplinary teams, which can lead to a lack of unity in actions. Objetive: To identify clinical criteria used by professionals to introduce oral diet in neurological hospitalized patients at risk of dysphagia. **Methods:** this is a descriptive study with a qualitative research design. The study involved 48 professionals engaged in two general hospitals in a provincial city of Paraná. Data were collected through a questionnaire. **Results:** 100% of professionals believe that the level of consciousness is very important for swallowing, were only 52.2% these consider that salivary swallowing represent an important procedure before orally stimulus implementation. These, 95.8% believe that the stroke and traumatic brain injuries are more important diseases related for the dysphagia. Hence, only 47.9% of them considered a speech therapist evaluation relevant after tracheal extubation, independent of intubation cause or pathology. Regarding the total of patients, 45.8% consider necessary the occlusion of the tracheotomy at the same time of the food supply, showing a non relationship between physiology of swallowing with the use of tracheotomy. About feed on a patient with a plastic cannula and inflated cuff, 52.1% of professionals consider it is possible and 47.9% say they do not, a fact much discussed in the literature. It is observed that 77.1% of professionals considered that the removal of the tracheotomy improves and facilitates the swallowing process, which is a statistically significant percentage. **Conclusion:** there is a regular knowledge of professionals about the dysphagia management in the hospital place. There is a need for a program of continuing education staff to improve the care of patients with dysphagia.

KEYWORDS: Deglutition Disorders; Patient Care Team; Deglutition

INTRODUCTION

The management of dysphagia patient is complex and requires an integrated multi-professional team action once there are several causes to dysphagia, consequences and impact caused by the clinical state of the patient. Therefore, recognizing the role of each team member in oropharyngeal dysphagia management is extremely important to the treatment success, because it will require that all the professionals establish clinic criteria to define the better moment to a speech-pathology assessment and introducing oral feeding.

But, in clinic practice it is observed that this is not the reality of the multi-professional[1] teams acting in Hospital environment. Despite the growth of requires to speech-language pathology assessment in patients with dysphagia in hospital, actually the professionals that work with these patients are not always trained to proper treat swallowing disturbances and patients still remain under risk of aspiration[2].

Speech language pathology procedure in hospital environment has as purpose to assess swallow and

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also to prevent and to provide continuous formation to the multi-professional team members[3].

For that reason, the speech-language pathologist and all the member of the multi-professional team should know and be able to recognize the basic conditions to the patient to undergo to a clinic swallowing assessment. That way the speech-language action may reach the purpose to reduce the index and complications of aspiration pneumonia[4].

Observing the reality of procedure in a wide variety of management and used criteria by the professionals to (re) introduce oral feeding to patients in hospital, it was verified the need to know better these clinic criteria used by the professionals, in order to plan continuous education action and seek for criteria standards and process involved in managing oropharyngeal dysphagia in hospital.

The main purpose of this research was to identify clinic criteria used by the professionals of two hospitals of one city from countryside of Paraná state to introduce oral feeding in patients with dysphagia risk.

METHODS

This is a descriptive study with exploratory design. The data was collected in two hospitals of the same city in the countryside of Parana state and had the participation of the professionals dealing with dysphagic patients, as follow: physicians, nurses, physiotherapists, and nutritionist. All participants signed out the informed consent.

The present study was approved by the Ethics in Research Committee of the *Universidade Estadual de Ponta Grossa (UEPG)* in March of 2012, under protocol number 4967/12 (attachment I), and the research was also authorized by the member of Medical Staff of the participants hospitals. The inclusion criteria for the participants were: to have full under graduation course and to be working at the hospital daily. It was excluded the nurse technicians and professionals working on emergency or “on call”.

To collect data it was used a questionnaire (attachment I) previously created based on the observation performed in the hospitals once it was perceived doubts and disagreements among the multi-professional team members to require a speech-language pathology assessment and introduce oral feeding. First, it was created a pilot questionnaire and based on the obtained results, the final questionnaire was built. Some questions were necessary to be re-written in order to adjust some technic terms to ease the comprehension of the questionnaire. The questionnaire has 7 (seven) objective of multiple choice questions and it was addressed in the hospital premises during shift hours. Despite the objective questions, it was used during data collection a journal to take notes of possible qualitative statements related to the moment of answering the questionnaire. The data analysis was performed using the test equality of two proportions by the softwares: SPSS V17, Minitab 16, and Excell Office 2010. The Equality of two proportions test is a non-parametric one comparing whether the answers proportions of two determined variables and/or its levels are statically significant. The result of each comparison has a p-value. Therefore, in case of values higher than the significance level adopted it is concluded the hypothesis to be true, otherwise the alternative hypothesis is considered. Besides, the Equality of two proportions test was also used to characterize the relative frequency distribution (percentage) of the questions 1 to 7 and all the percentage were calculated for the total of 48 participants. The significance level assumed to statistical analysis was 0.05 (5%), also all the confidence interval were built along representing the total of 95% of statistical confidence.

RESULTS

The data collection was in 2013 from April to July, with 48 participants as 30 physicians, 11 nurses, 4 physiotherapists, and 3 nutritionists. 27 were male and 21 female.

The obtained results were quantitative analyzed using the Equality of Two Proportions Test and qualitative divided in four domains related to clinic criteria used by the professionals to introduce oral feeding in dysphagic patients, as: consciousness level, saliva swallowing, dysphagia group risk, orotracheal intubation impact, and tracheostoma in swallowing. Following are the categories of this analysis, as well as the graphics of the results:

Regarding consciousness level, 48 (100%) participants considered this domain fundamental to introduce oral feeding to a patient. The Glasgow Scale was quoted by 45 professionals, and the other 3 participants reported they do not use objective scale. The Glasgow scale was the single one reported by the participants and 9 points was the minimum level considered to introduce oral feeding. The analyzed variable had p-value <0.001.

About the possibility of swallowing of the patient before introducing oral feeding, 54,2% considered to be important the presence of saliva swallowing.

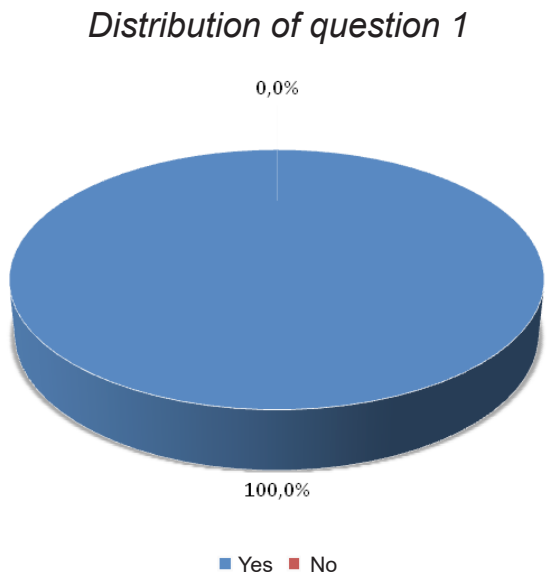

Figure 1 – Whether considering the consciousness level as fundamental to introduce oral diet to a patient

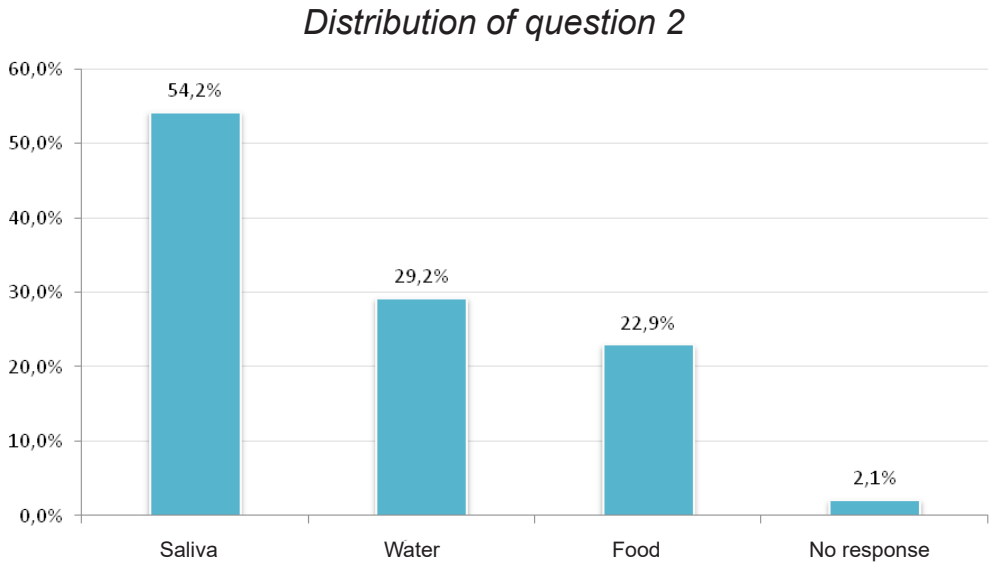

Figure 2 – Swallowing assessment of the patient before introducing oral diet

Relating diseases and dysphagia risk, the Stroke was the most recognized as group risk, Parkinson's disease and Alzheimer's disease were less reported. None of the participants reported chronic pulmonary obstructive disease (CPOD) as group of risk to dysphagia.

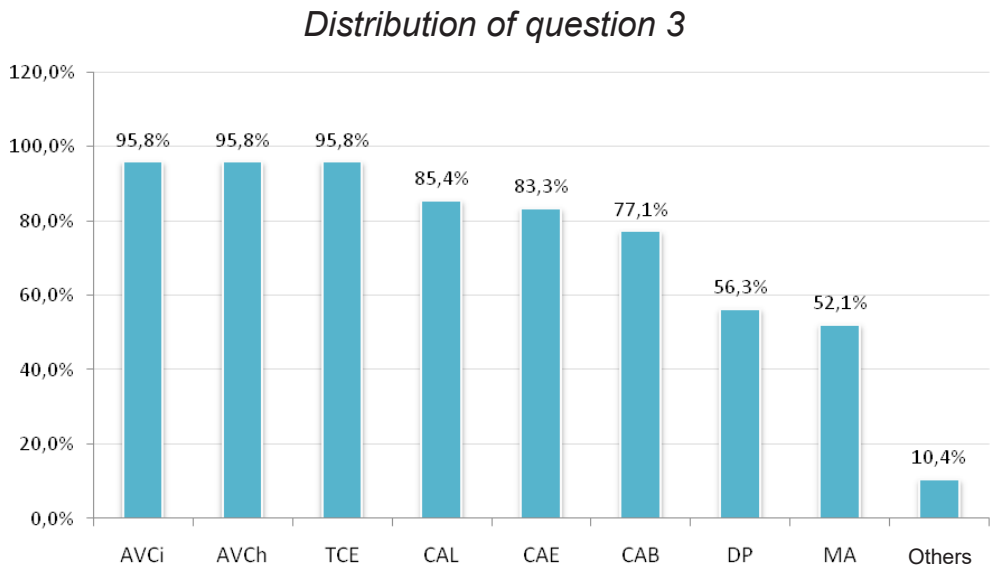

Figure 3 – Relation among diseases and dysphagia risk

About orotracheal intubation (OTI), the time after extubation considered proper to the patient to be assessed and therefore safely receive oral feeding, it was verified that 23 (47.9%) of the participants consider 24 hours the needed time. Due to the prevalence of the answer, this is considered a percentage statically significant regarding the others.

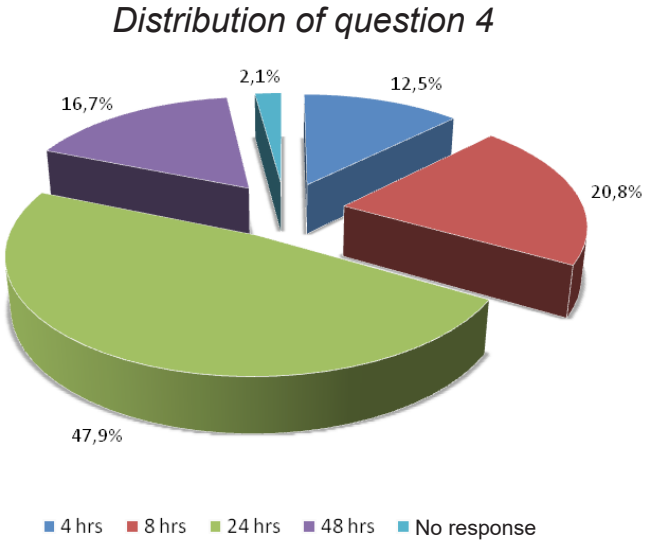

Figure 4 – Time after extubation patient is safe to receive oral diet

Regarding tracheostoma and the need to occlude the stoma during the offer of oral feeding, only 22 (45.8%) of the participants considered necessary the occlusion, against 26 (54.2%) that do not consider this necessary. It is observed that the variables analyzed are statically similar between the groups.

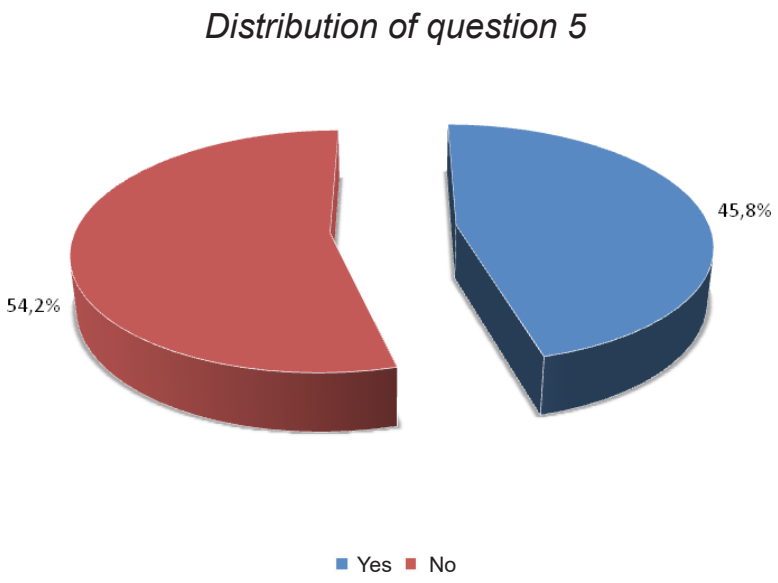

Figure 5 – Whether is necessary to occlude stoma in a patient while offering oral diet

Still related to tracheostoma, whether is possible to feed a patient with plastic cannula with insufflated cuff, 25 professionals (52.1%) reported to be possible to feed a patient in this condition and 23% (47.9%) reported no. As well as in question 4, this question is also statically similar between the groups.

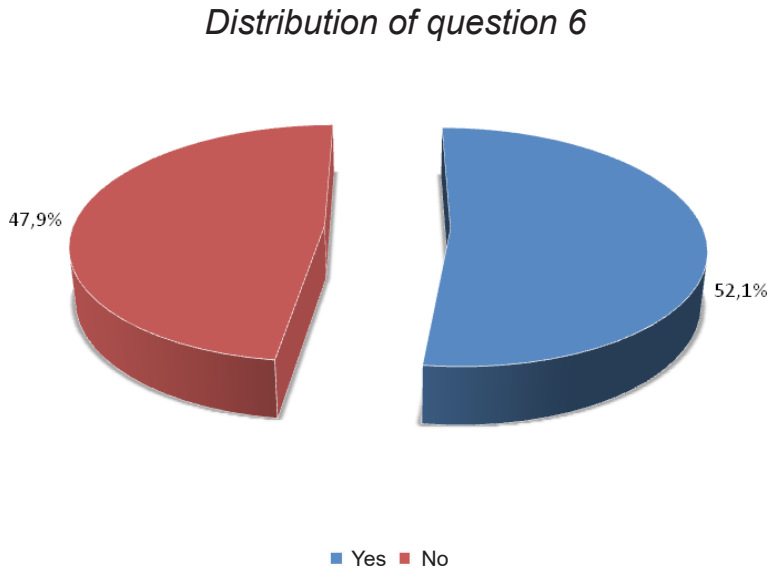

Figure 6 – Whether patient may receive oral diet while using plastic cannula (with inflated cuff)

About taking off the tracheostoma cannula and the changes that may cause in swallowing process, it is observed that 37% (77.1%) of the professionals considered that removing the tracheostoma improves and facilitates the swallowing process and this percentage was statically significant.

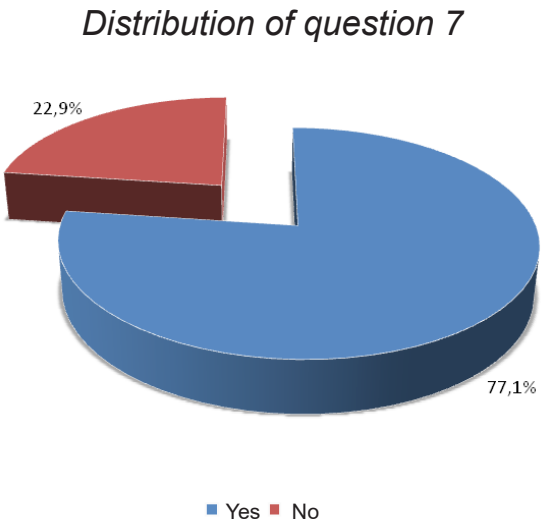

Figure 7 – Whether removing cannula impacts swallowing process

Still based on the results, it is worthy to note the p-values of comparison to each answer level were performed always regarding the prevalent.

DISCUSSION

To consciousness level assessment, the Glasgow Coma Scale[5] is the most used parameter used recently in the world, especially in Stroke patients, having simple physical examination. There is a note about being fundamental to consider the consciousness level of the dysphagic patient to a proper assessment, since the reduction of consciousness[6] level is a factor of risk to dysphagia, once the decrease of reflex and protection mechanisms may increase the aspiration risk. It is indicated that the patient have at least 8-9 points of consciousness in the Glasgow Coma Scale (GCS) to be able to safely undergo a swallowing assessment[7].

About saliva swallowing, it was verified the act of swallowing (saliva) also occurs during meals, which there is no consciousness to this act, and also during sleep, called spontaneous swallowing[8,9]. Therefore, to be alert in a way the patient is able to manage his own saliva is fundamental to predict the possibility or ability to deal with oral feeding. Still in this context, it was observed in elderly and in patients with neurogenic dysphagia the main clinic implications in swallowing, with significant loss in spontaneous swallowing[10]. A study[11] about the ways the cortex is stimulated during swallowing saliva or water; it was observed the cortex activity during water swallowing was positively higher than saliva. The result points out the need to observe saliva swallowing before introducing oral feeding.

About the diseases indicating risk to dysphagia, several studies approach epidemiologic aspects and dysphagia natural history, associated to vascular brain diseases, pointing out to an incidence of 50% of swallowing disorders[12]. Besides, the deviations in breathing standard and/or ventilator may influence the coordination between the proper swallowing and breathing, and this synchrony is essential to proper protect the low airway[13]. Therefore, patients with breathing disorders, as Pulmonary Obstructive Chronic Disease (POCD), also represents expressive risk group to dysphagia. However, the participants of this study seem not to know the risk. Shortly, the professionals need to recognize more diseases as belonging to the risk group to dysphagia.

Within the clinic criteria presented according to the literature data, it was verified that the speech language pathology assessment is indicated in long intubation cases in a minimum period of 24 hours after extubation, purposing to spontaneously reduce the effects of the long intubation[14]. Among the effects, long intubation may damage the mucosa and larynx and pharynx muscles causing sensory and motor deviations that justifies as premature loss of bolus as deviation in larynx lift, from vocal fold movement to the proper closure and airway protection, penetration and/or aspiration before, during and/or after swallowing and also stasis[15]. Besides, it is important to mention that orotracheal intubation causes disturbance in swallowing pharyngeal phase, reducing the laryngopharyngeal sensibility, directly related to extubation time, once the increase of this may improve the complications caused by orotracheal intubation. Spontaneous breathing also contributes to improve the sensibility of the region[16].

Physiologically, the use of tracheostoma implies in pressure deviation important to the swallowing process, besides, the weight of the cannula may prejudice the larynx lift which may cause a disturbance in the normal swallowing process leading to dysphagia, even a transitory one. The majority of the participants considered the impact that tracheostoma may cause in the swallowing when answering the questionnaire.

Another very important discussion that literature points out is the cuff use and introducing oral feeding, since there are different points of view regarding this subject. Knowing the cuff was not created to stop passing aspirated food and control aspiration, several authors[17,18] are questioning the presence of aspiration with the use of cannulas with cuff. Besides, they also argue the possibility of rests of food to congest above the cuff, providing bacteria growth. According to a literature review study[19] the cuff is indicated to blocking low airways during mechanic ventilation, preventing secretion, food and gastric content aspiration. However this concept of cuff indication to avoid aspiration should be replaced by the concept of decreasing the amount of aspiration, since the inflated cuff does not totally protect the low airways during offering food. As consequence, the high stasis of secretion, saliva, and food that are always above cuff, tend to drip aside trachea and allow the maintenance of bronchoaspiration of the material gathered at cuff. Other factor to be discussed it the impact the cuff in swallowing pharyngeal phase. In the previous mentioned study, the authors still describe the results to be controversial showing as the association of inflated cuff with the increase of silent aspiration, as cuff not interfering in aspiration[19].

At last, it is interesting to perceive at the same time that the majority of the professionals answered removing the tracheostoma improves swallowing, they did not consider in the same proportion the importance of deflate cuff. This data reveals, one more time, the need to continuous education programs in order to discuss and rethink these questions, mainly regarding swallowing physiology, understanding the normal swallowing mechanism and the impact that the interventions of all professionals may cause.

CONCLUSION

This research points out the existence of multiprofessional team knowledge about the dysphagia management in Hospital environment, especially regarding the consciousness level in swallowing process, the need to swallow saliva before starting oral feeding, removing the tracheostomy improving swallowing, and the perception of Strove and Traumatic Brain Injury as main diseases related to dysphagia. However, it is still observed the need of the speech-language pathologist to continuously participate of formation programs focusing on the management of the patient with dysphagia.

RESUMO

Objetivo: identificar critérios clínicos utilizados por profissionais para liberação de alimentação via oral em pacientes hospitalizados que apresentam risco para disfagia. **Métodos:** participaram do estudo 48 profissionais que atuam em dois hospitais gerais de uma cidade do interior do Paraná. Os dados foram coletados por meio da aplicação de um questionário. **Resultados:** 100% dos profissionais consideram o nível de consciência importante para a deglutição, apenas 52,2% vê a importância da presença de deglutição salivar antes que se inicie via oral. Destes, 95,8% elencam Acidente vascular cerebral e Traumatismo cranioencefálico como principais doenças relacionadas a disfagia, porém nenhum apontou a Doença Pulmonar Obstrutiva Crônica. Além disso, somente 47,9% reconhecem a importância da avaliação fonoaudiológica após extubação orotraqueal independente do motivo da intubação ou patologia de base. E, 45,8% considera necessária oclusão do orifício da traqueostomia no momento da oferta alimentar, mostrando que não fazem a relação entre fisiologia da deglutição e uso da traqueostomia. Sobre alimentar um paciente com cânula plástica e balonete insuflado, 52,1% dos profissionais consideram ser possível e 47,9% dizem que não. Observa-se que 77,1% dos profissionais considera que a retirada da traqueostomia melhora e facilita o processo de deglutição, sendo este um percentual estatisticamente significante. **Conclusão:** há um conhecimento regular dos profissionais sobre o manejo das disfagias em âmbito hospitalar. Verifica-se a necessidade de um programa de formação continuada a equipe para melhoria do atendimento de pacientes disfágicos.

DESCRITORES: Transtornos da Deglutição; Equipe de assistência ao Paciente; Deglutição

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ATTACHMENT I

QUESTIONNAIRE – CLINICAL CRITERIA TO INTRODUCE ORAL DIET.

Do you consider the consciousness level a fundamental factor to introduce oral diet to a patient? If so, please specify which subjective scale you use and the minimum level of the used scale you consider to introduce oral diet.
( ) YES. Scale? _____
Level? (score/punctuation) _____
( ) NO

How do you assess the swallowing possibilities of a patient before introducing oral diet?
( ) Saliva swallowing
( ) Water swallowing
( ) Food swallowing

From the list of diseases below, which do you consider to be related to dysphagia risk?
( ) Ischemic Stroke
( ) Hemorrhagic Stroke
( ) Traumatic Brain Injury – TBI
( ) Alzheimer's Disease
( ) Parkinson's Disease
( ) Oral cancer
( ) Larynx cancer
( ) Esophagus cancer
( ) Other _____

Regarding orotracheal intubation (OTI), how long after extubation do you consider to be safe to introduce oral diet?
( ) 4 hours after
( ) 8 hours after
( ) 24 hours after
( ) 48 hours after

Based on your knowledge, do you consider necessary to occlude the stoma of a patient while offering food?
( ) Yes ( ) No

When patient have a plastic cannula (with insufflated cuff) do you consider possible to receive oral diet?
( ) Yes ( ) No

In your opinion, to remove the cannula may modify/improve the swallowing process of a patient?
( ) Yes ( ) No