

CRITERIA FOR CLINICAL SPEECH THERAPY EVALUATION OF TRACHEOSTOMIZED PATIENT IN HOSPITAL BED AND HOME CARE

Cr terios para avalia o cl nica fonoaudiol gica do paciente traqueostomizado no leito hospitalar e internamento domiciliar

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ABSTRACT

Purpose: to know the criteria used by speech therapists in the clinical evaluation of the patient in hospital bed with tracheostomy and / or home detention, the city of Salvador, Bahia. **Methods:** this is a cross-sectional, descriptive, quantitative approach, whose population consisted of 28 speech therapists, who contributed a response form containing 19 questions on the subject criteria for clinical evaluation of patients with tracheostomies Speech in Inpatient and Home Care Hospital Bed. **Results:** in this study, in relation to the criteria selected primarily for clinical practice the results were: 26 (92.9%) clinical stability, 24 (85.7%) level of consciousness, 24 (85.7%) state Alert, 14 (50%) ability to protect airway, 9 (32.1%), nutritional status, 9 (32.1%) cough and 6 (21.4%) chance of receiving oral. **Conclusion:** at the end of the study it was concluded that the criteria for evaluating speech in tracheostomized patient in bed in the city of Salvador, Bahia, most is according to the criteria described in the literature. However, few studies exist that establish criteria for decannulation, therefore, it emphasizes the need for validation protocols for a better performance of the process of decannulation in these patients.

KEYWORDS: Deglutition Disorders; Tracheostomy; Speech, Language and Hearing Sciences

■ INTRODUCTION

Swallowing results from complex and dynamic neuromuscular activity involving bone, muscle and cartilage of the digestive and respiratory structures acting in an organized manner. It is initiated by chemical and mechanical stimulation of a large number of structures in the oral and pharyngeal cavity, controlled by the CNS, and its main function is to transport food from the mouth to the stomach, preventing the entry of any substance in the airway, and ensuring the maintenance of the individual's nutrition and hydration^{1,2}.

The complex process of swallowing can be interrupted by a number of mechanical and functional variables, including the presence of tracheostomy. Tracheostomy is a surgical procedure, often performed in emergency situations to promote airways clearance and in prolonged intubation, however its impact is immediate, triggering changes in the integration of respiratory and swallowing functions^{1,3}. Recent studies show that prolonged tracheostomy can compromise the sensory and motor functions of swallowing mechanisms, resulting in dysphagia, and favoring the onset of late complications, including tracheal stenosis, bleeding, fistulas, infections, hemorrhage and bronchoaspiration^{3,4}.

Thus, considering the biomechanics of swallowing, tracheostomy alters the anatomy and physiology of the respiratory system, influencing the protective mechanisms of the airways, the voice production and also the digestive system, affecting in the dynamics of swallowing. Initially, by hindering the

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movement of elevation and anterior displacement of the larynx during the act of swallowing and also by a combination of factors that promote loss of glottal reflex, such as pharyngolaryngeal desensitization mechanism, the absence of subglottic pressure, the shorter time of vocal fold closure and compression of the esophagus. These changes depend on many variables, from the underlying disease to the choice of appropriate cannula type for each patient. In this way, to assess the real impact of tracheostomy on swallowing and its prognosis in rehabilitation is necessary to know the criteria for the analysis of the parameters involved in the swallowing of tracheostomized patients⁵.

Researchers and clinicians have discussed the impact of tracheostomy on stomatognathic functions, especially in the biomechanics of swallowing. In the evaluation of tracheostomized patient, the objective is to know his clinical status to determine the diagnosis and the procedure to be followed. The criteria for clinical speech therapy evaluation are essential to ensure proper management and safe approach of tracheostomized patients. These criteria involve many complex factors that must be considered, such as: cognitive, behavioral, linguistic, breathing, phonation and orofacial motor aspects^{2,6}.

Concerning respiratory conditions, it is necessary to highlight the factors that enhance swallowing dysfunction and changes in vocal production such as the use of orotracheal intubation and prolonged mechanical ventilation, as well as parameters related to the type of cannula and the use of cuff. In cases of patients using inflated cuff, it should be considered interdisciplinary work, promoting team discussions to assess the risks and benefits of deflating it for reintegration of swallowing and breathing functions. While maintaining the cuff deflated, one should check the possibility of phonation valve adaptation in order to facilitate swallowing, breathing and voicing functions closer to physiology. And in this way, helping to improve the process of decannulation and swallowing rehabilitation².

However, there are few studies that establish criteria for weaning from tracheostomy, the decision regarding decannulation is still based on subjective judgments as opposed to standardized protocols. Thus, all the professionals involved in the treatment of tracheostomized patients should be alert to the following warning signs of complications: residue of saliva or food into the trachea, change in color or appearance of the secretion, fever, worsening oxygenation, decreased level of consciousness and abrupt change of radiological image⁴.

The speech therapist should observe and analyze each phase of swallowing, making use, if necessary of Blue Dye Test and instrumental

evaluations that are complementary to clinical ones, for example, swallowing videoendoscopy (SVE) and/or videofluoroscopy of swallowing (VFS)¹. The use of speaking valve is also extremely important for the various benefits it can provide in the operation of swallowing and oral communication and facilitate weaning from mechanical ventilation. Despite these evidences, there is still discussion about the criteria used for clinical swallowing therapy evaluation of tracheostomized patient in hospital and home care⁶.

Therefore, the aim of this study was to know the criteria most used by speech therapists in the city of Salvador, state of Bahia, for clinical evaluation of tracheostomized patient in hospital bed and/or home care.

■ METHODS

It is a cross-sectional, descriptive study with a quantitative approach. The inclusion criteria for this study were: speech therapists who work with tracheostomized patients in hospitals and/or home care.

The material used in the research consisted of a 19 multiple-choice questionnaire, developed by the researchers and based on studies developed and related to the subject which was applied to 36 speech therapists who work with tracheostomized patients in hospital bed and/or home care in Salvador, Bahia. The items on this form intended to verify which criteria were used in clinical speech evaluation of the tracheostomized patient in hospital bed and/or home care, besides aspects of vocational training in the specific field.

Data collection took place from April to May 2011, through previously scheduled contact by telephone with speech therapists who work with tracheostomized patients in hospital and/or home care and also was applied during breaks from a post-graduation course in Orofacial Motricity with Focus on Dysphagia and Hospital Phonoaudiology, CEFAC in the city of Salvador, Bahia. Among the 36 speech therapists who were willing to participate in the study, 7 dropped out and 1 was excluded for not having replied to all questions claiming to not work with tracheostomized patients.

The research project was approved by the Research Ethics Committee of the Centre of Expertise in Clinical Speech Therapy under number CAAE 0055.0.356.000-11 which qualified it as a non-risk study. There was the need of the Term of Consent that was signed by all participants before answering the survey form.

Collected data was tabulated in Excel, FPF version 16 and analyzed in percentages using absolute and relative frequencies. Results are

presented through graphs to facilitate understanding of the findings of the study.

■ RESULTS

From a total of 36 applied forms, 28 were fully completed, returned and analyzed. The profile of the interviewed speech therapists in this study showed a coincident percentage relation to time of training and clinical work with tracheostomized patients. The majority of them, 20 (71.4%) had less than 5 years of training and clinical work, 7 (25%) had between 5 and 10 years, and only 1 (3.6%) had more than 10 years. 25 of them (83.9%) are undertaking a post-graduation course in Orofacial Motricity with Focus on Dysphagia and Hospital Phonoaudiology, 4 (14.3) have attended other specialization course; 2 (7.6%) have attended master's degrees, and none has attended a doctorate. Figure 1 and 2

When asked about the warning signs so that other professionals of the team could trigger the speech evaluation, 24 (85.7%) reported cough; 28 (100%), choking; 23 (82.1%), drooling; 25 (89.3%), salivary stasis; 21 (75%), weight loss; 25 (89.3%), wet voice; 20 (71.4%), dysphonia; 23 (82.1%), cognitive changes; 24 (85.7%), peritracheostomy escape; and 6 (21.4%) also mentioned other signals in response to this question, such as fever, aspiration pneumonia, respiratory infections, refusal to eat, malnutrition, dehydration and alternative ways of feeding.

Concerning criteria primarily selected for clinical practice, the following results were found: 26 (92.9%) clinical stability; 24 (85.7%) level of consciousness; 24 (85.7%) alertness; 6 (21.4%) chance of oral administration, 9 (32.1%) nutritional status, 14 (50%) ability to protect airways, and 9 (32.1%) cough. Differentiation of the items level of consciousness (individual's ability to recognize himself and environmental stimuli) and alertness (wakefulness and attention and able to participate)^{11,14} was performed during the delivery of forms to respondent speech therapists in this study.

Among cognitive and language difficulties considered as interference factor for speech evaluation, 25 (89.3%) considered attention; 8 (28.6%), memory; 15 (53.6%), orientation; 26 (92.9%), comprehension; 12 (42.9%) expression; 16 (57.1%), praxy; 14 (50%), perception; and 14 (50%) motivation.

Referring to the criterion of time for speech therapy service after extubation, 6 respondents (21.4%) stated that care should begin within 24 hours of extubation and 22 (78.6%) reported that the time for the beginning of service is 48 hours.

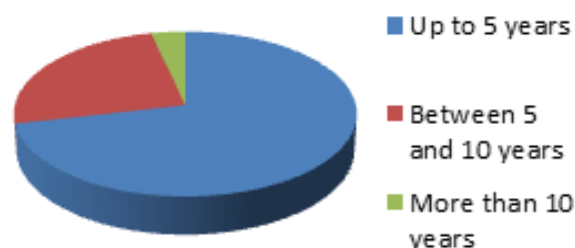


Figure 1 – Time for academic training and working with tracheostomized patient

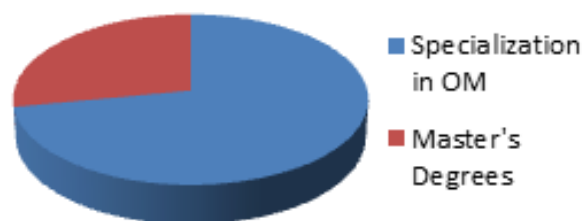


Figure 2 – Another academic training

Among physiotherapeutic parameters for weaning from mechanical ventilator that respondents considered to be important for speech evaluation, it was observed that 23 (82.1%) signaled oxygenation; 11 (39.3%), ventilation; 15 (53.6%), ventilatory demand; 17 (60.7%), respiratory mechanics; 19 (67.9%), heart rate; and 19 (67.9%), standard of ventilation.

Regarding the use of Blue Dye Test, 28 speech therapists (100%) stated that they use the test in clinical practice, and 26 (92.9%) used the blue dye type (aniline dye cooking). When colored food in the tracheostoma region is traced, 14 (50%) affirmed that the test is redone.

In cases of tracheostomy cuff, 28 (100%) considered a physiotherapeutic evaluation. In these cases, respondents stated that the functional assessment of swallowing proceeds as following: 1 (3.6%) with insufflated cuff; 1 (3.6%) with slightly insufflated cuff, and 26 (92.8%) with cuff deflated. 28 (100%) of the respondent speech therapists felt that the insufflated cuff tends to worsen the function of swallowing.

Concerning consistency in food choice for the beginning of the test, 1 (3.7%) signaled thick liquid; 18 (66.7%), thin pasty; and 8 (29.6%), thick pasty. One participant considered more than one

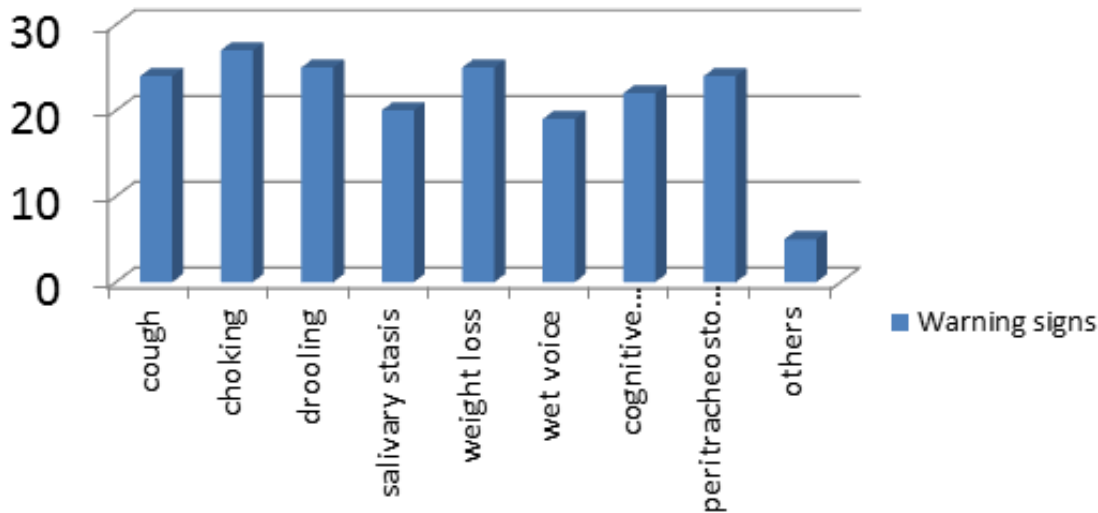


Figure 3 – Warning signs

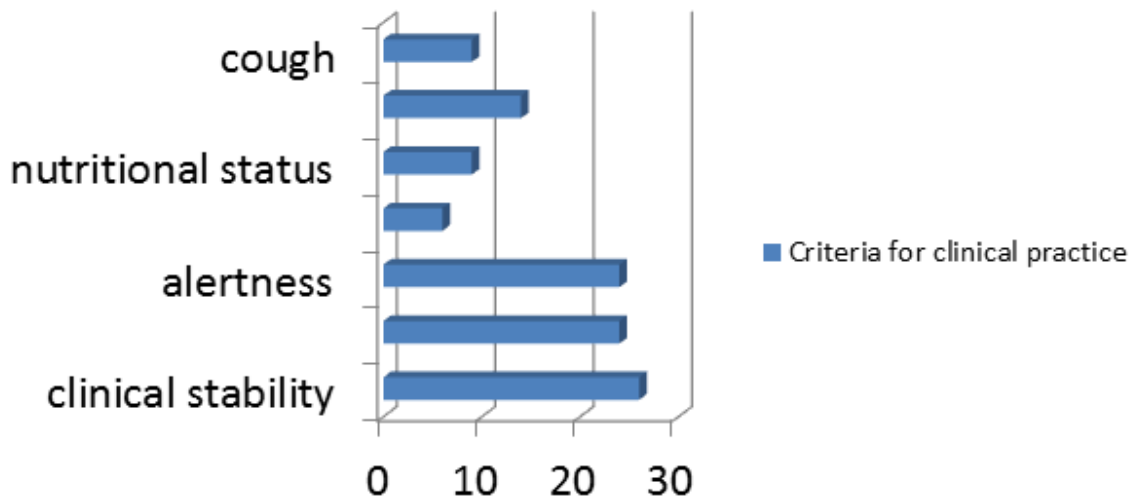


Figure 4 – Criteria for clinical practice

alternative and therefore was excluded from the statistical analysis for this question.

All of the 28 respondents said that the type and size of the tracheostomy tube interfere in the functioning of the swallowing. In the present study, the most commonly used cannula in the clinical work of the interviewed professionals are the metal ones (75%), with the cuff (60.7%) and made of silicon (7.1%), highlighting the possibility of two types of cannula in the clinical work in which they operate (hospital or home care).

Only 10 (35.7%) of respondents felt that the cuff pressure is routinely checked in the clinical work. Of these, 2 (20%) observed that pressure is checked more than once a day; 6 (60%) that the pressure is checked daily; and 2 (20%) once a week.

As signs of complications in the process of decannulation, 19 of them (67.9%) noted residues of saliva in the trachea; 20 (71.4%), food residues in the trachea; 18 (64.3%), change in color or appearance of secretion; 12 (42.9%), fever; 25

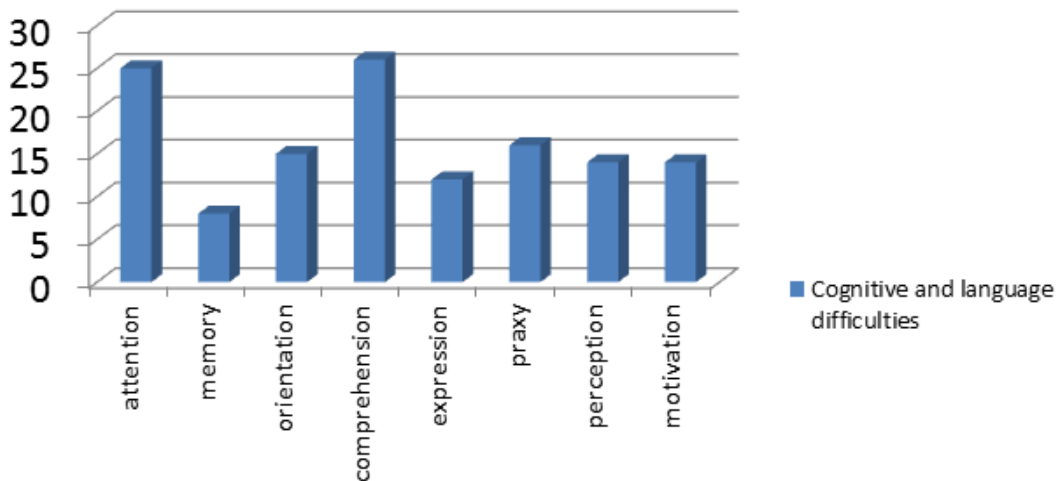


Figure 5 – Cognitive and language difficulties

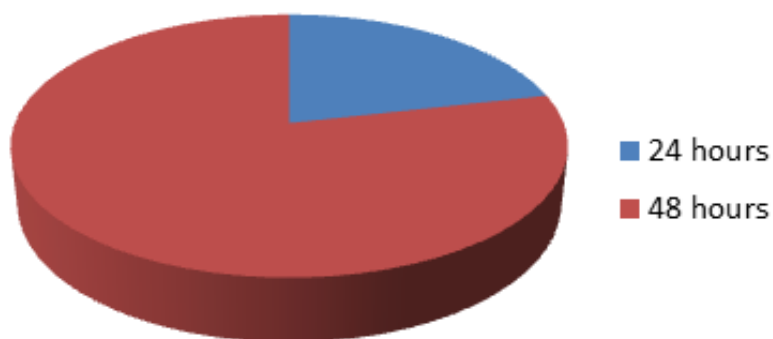


Figure 6 – Post-extubation service

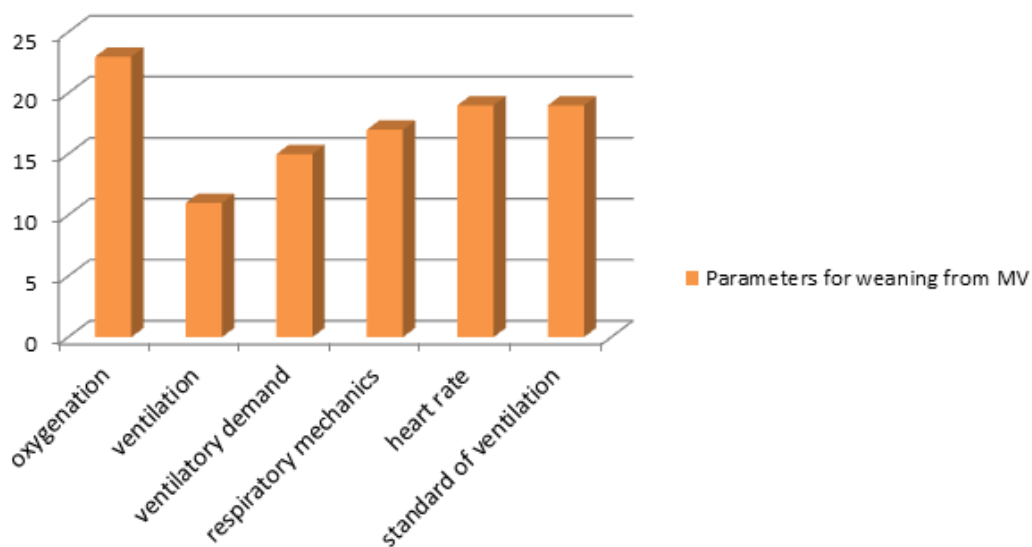


Figure 7 – Parameters for weaning from MV

(89.3%), worsening oxygenation; and 22 (78.6%), decreased level of consciousness.

In this study, it was observed that 20 (71.4%) of the respondents stated that interdisciplinary intervention is common in clinical settings, thereby accelerating the process of weaning from tracheostomy. And 10 of them (35.7%) considered that the speaking valve is used as a resource during the assessment and rehabilitation of the tracheostomized patient.

■ **DISCUSSION**

The present study that originally describes the questionnaire reveals that the profile of the interviewed speech therapists generally has academic formation and clinical experience with tracheostomized patients (83.9%), and is represented by professionals who are starting a career (up to 5 years) and undertaking a specialization course in Orofacial Motricity with focus on Dysphagia and Hospital Phonoaudiology which explains the recent participation of speech therapists in hospitals, mainly regarding the monitoring of patients in

bed, semi-intensive and ICU. With the expansion in recent decades, the speech therapist needed to expand his scientific expertise and assistance subsidy to participate more effectively in the evaluation, diagnosis, management and treatment of tracheostomized patients^{7,8}. In the findings of this research, there is a concordance with the literature regarding the scientific growth of specialization courses required for hospital speech therapy treatments. Some respondents (14.3%) reported having attended other kind of specialization and (7.1%) master's degree with formation and experience time over 5 years, performing in other areas of speech therapy that are already recognized by the scientific community.

The results of this research show warning signs considered important so that other team professionals can proceed to a speech evaluation: choking, wet voice, salivary stasis, cough, peritracheostomy escape, cognitive changes, drooling, weight loss and dysphonia. The last two signs were the least mentioned by the respondents. It is also important to note that 21.4% listed other warning signs, such as fever, pneumonia, feeding refusal, repetition

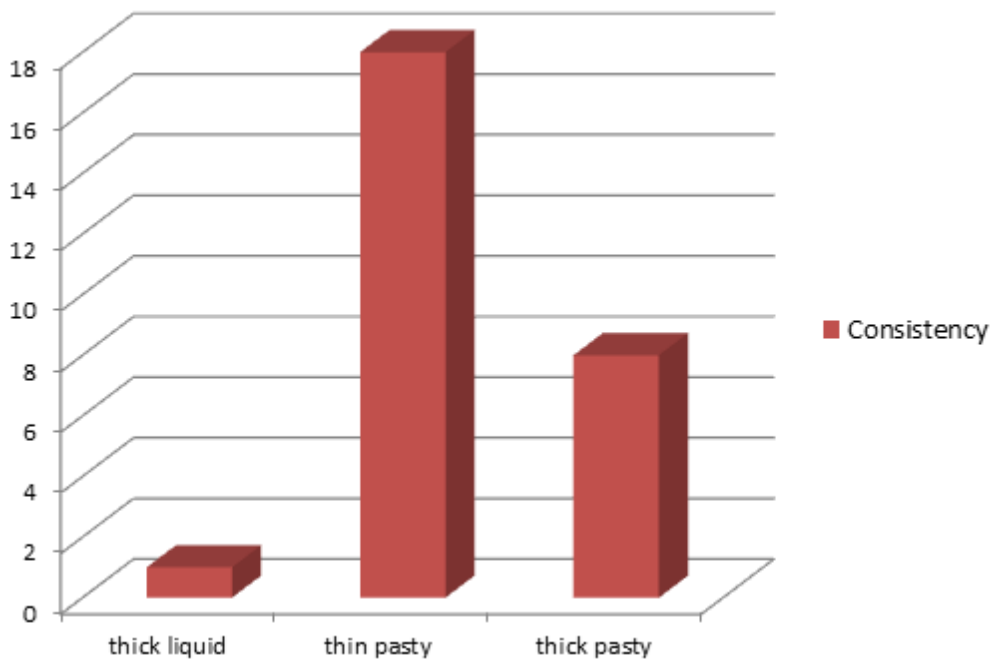


Figure 8 – Consistency

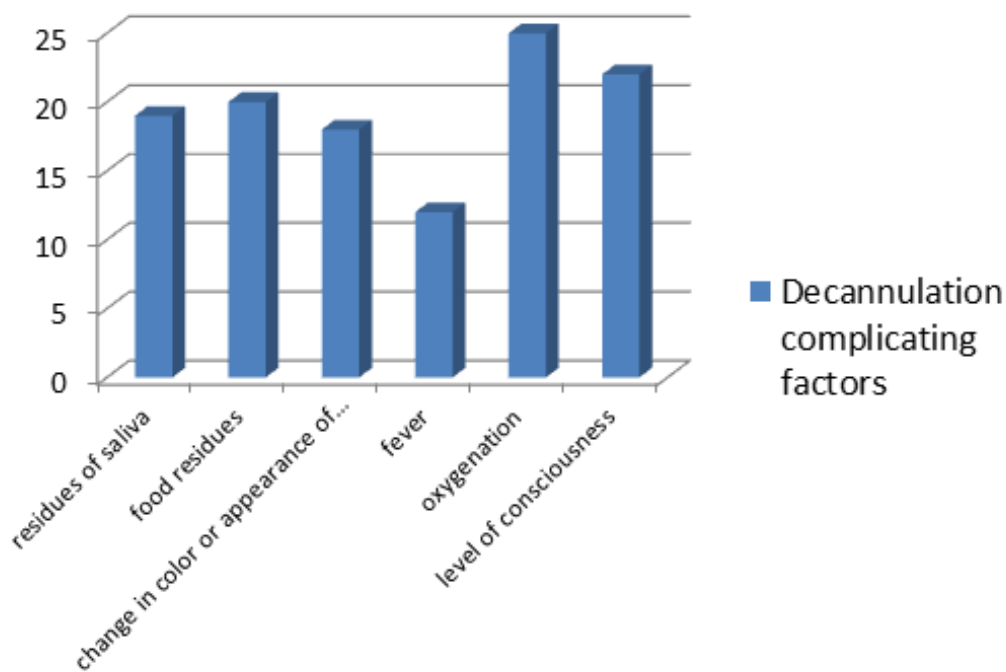


Figure 9 – Decannulation complicating factors

respiratory infections, dehydration, malnutrition and alternative ways of feeding.

Nowadays, some authors refer to the need to be aware of oropharyngeal difficulties that can be observed by discomfort during swallowing, choking, multiple swallowings for a small bolus, oral food residues, drooling, feeling of something stopped in the throat, oral and/or nasal regurgitation, difficulty to deliver the speech sounds after swallowing with impaired vocal quality (wet voice), sialorrhea, altered breathing, sweating and fatigue after a few swallowings^{9,10}. Other studies highlight the importance of cognitive level (alertness and consciousness) in the process of swallowing, changes in dietary habits and lung infections^{1,11,12}.

As for the warning signs considered important by professionals of the team so that they can trigger the speech evaluation stand out coughing, choking, drooling, salivary stasis, weight loss, wet voice, dysphonia, cognitive alterations and peritracheostomy escape. Weight loss was not cited by 57% of respondents who had between 5 and 10 years of training, consistent with the literature which states that although the weight loss is a symptom of dysphagia, is found less frequently¹⁰.

The findings in the literature mention clinical stability, adequate cognitive and alertness levels, possibility of oral feeding, nutritional status and readiness to handle the food bolus in the oral cavity, consistent with results of this study^{6,9,13}. However, this study also showed a significant percentage of

50% for ability to protect airways that was not found in the literature.

Among the cognitive and language difficulties considered as interference factor for speech evaluation, understanding, attention and orientation were cited by more than 50% of respondents. However, half of the respondents answered motivation and perception, and less than half, speech and memory.

Studies emphasize the need for special care for the critically ill patients of neurological basis, since most had signs of laryngeal penetration, and change of cognitive state and awareness, making difficult a safe and functional feeding process⁹. Also noteworthy is that, within the universe of patients with oropharyngeal dysphagia of no neurological basis, mechanical dysphagia usually keeps their intact neurological condition, thus not having cognitive or awareness state changes. These patients have a higher incidence of mild dysphagia, compared to ones with oropharyngeal dysphagia of neurological basis.

Some authors^{11,14} consider that in relation to the level of consciousness, in other words, the individual's ability to recognize himself and environmental stimuli, and alertness, or wakefulness and attention and ability to interact, the group of brain injured presented themselves less alerted, connected and collaborative with speech evaluation in comparison to patients without brain damage. Moreover, they observed less possibilities of oral intake in

patients with altered levels of consciousness and collaboration.

The alert level is important in the evaluation of swallowing, particularly in neurological changes, as they may cause deficits in attention, guidance and cooperation with the clinical evaluation. Cognitive and behavioral factors such as attention, memory deficits and agitation interfere in the introduction and progress of oral intake which means that patients who had alterations in these functions require alternative ways of intake and longer feeding and/or changes in the volume and consistency of the diet¹¹.

This positive influence of the state of patients confirms the findings of this study which argue that the level of preserved consciousness decreases the risk of aspiration pneumonia, then considered a protective variable that allows better prognosis of communication and swallowing¹². Therefore, the present study agrees with the literature regarding the cognitive functions needed for proper progression and reintroduction of oral intake, such as attention, alertness, comprehension, motivation and perception.

Referring to the criterion of time for speech evaluation after extubation, 21.4% considered 24 hours, and 78.6% 48 hours. According to the literature, the first speech therapy intervention should be done 24 hours after extubation in adult patients considering the underlying disease and OTI time to administer oral diet¹³ (pasty and moistened food), performing pharyngeal cleaning maneuvers and airways protection when possible, whereas with prolonged intubation may have decreased sensitivity and presence of edema in the oropharyngeal region, increasing the risk of aspiration. Exception is the group of elderly patients where it is professed that the evaluation is carried out after 48 hours, due to the increased risk of post-extubation aspiration¹³.

The data found in the literature disagree with the findings of this research with regard to the time for speech evaluation after extubation, which may be justified by the increased demand for geriatric care assisted by the interviewed professionals and the reduced amount of information found on this topic and on clinical work with elderly in the current literature.

Considering the physiotherapeutic parameters for classification of the patient on a protocol of discontinuing mechanical ventilation, It is noted that the mechanical ventilation also causes changes in the physiology of swallowing, presenting alteration of tonicity and range of motion of oropharyngeal structures. The weight of the equipment adapted to the cannula, added to the reduction of the upward mobility posed by the cannula justifies a higher dysfunctional degree of the elevation of the larynx

and hence affects the safety of the pharyngeal carriage of the bolus. In the presence of ventilation, the duration of swallowing apnea (pharyngeal phase) will also be modified and the patient will have to adapt and coordinate the various phases of inspiration and expiration of the ventilator².

Knowing that mechanical ventilation is a factor that interferes proper functionality of swallowing, most of the respondent speech therapists are in agreement with the literature regarding physiotherapeutic parameters to enroll patient into a protocol for mechanical ventilator weaning, citing main parameters oxygenation, heart rate and ventilation pattern.

In the study, it was found that all respondents mentioned the performance of the Blue Dye Test as a criterion in their clinical evaluation. Whereas 92.9% stated that they used the blue dye type (aniline dye cooking). When colored food in the tracheostoma region is traced, 50% affirmed that the test should be redone. During the evaluation of tracheostomized patient, while offering the food bolus it should be considered the possibility of coloring the food with blue dye to facilitate the identification of small amounts of aspirated material in the lower airways, although it is known that the presence of colored material in aspiration is a positive sign of aspiration of the offered bolus, but the absence can be a false negative result. Thus, it is always necessary to consider the whole picture of the patient².

Studies have reported the Blue Dye Test as a procedure used to color the food in order to identify the aspiration of saliva of tracheostomized individuals^{13,15}. A simple and inexpensive procedure that can be used in the hospital bed to evaluate the swallowing of saliva and food in different volumes and consistencies¹³. Other authors have questioned the accuracy of this procedure, there is no consensus as to its use during the speech evaluation^{13,16}. There are claims that the procedure is sensitive for the detection of tracheal aspiration, especially in patients undergoing mechanical ventilation^{17,18}.

The results of this study agreed with the literature regarding the use of this procedure for penetration and/or aspiration evaluation during swallowing of food in tracheostomized individuals, however it was not found studies that demonstrate a consensus referring to the Blue Dye Test standardization and manner of use. Being performed so as to result in subjective responses.

In cases of tracheostomy cuff, 100% of respondents considered necessary the physiotherapeutic evaluation. The interaction between doctor, nurse, physiotherapist and speech therapist lets shorten the use of tracheostomy, accelerating weaning in a safer way for patients with lower risk of failure and

complications⁶. Guidelines of conduct based on evidence have confirmed the benefit of the protocols of ventilator weaning and the physiotherapy important role in this process, but little is published about the importance of the interdisciplinary team work in the tracheostomy weaning.

Therefore, all respondents consider physiotherapeutic evaluation as an essential information about the patient's respiratory conditions and handling cuff factor which are important criteria to be used in speech evaluation. More than half of respondents, 92.8% answered that the functional assessment of swallowing proceeds with the cuff deflated, and 100% also stated that the inflated cuff tends to worsen the function of swallowing.

Comparing to the condition of the tracheostomy with the deflated cuff, the inflated cuff can cause complications such as: promoting colonization by gram negative, stimulating the formation of granulation tissue, promoting the accumulation of secretions above the cuff, and even fixing the larynx in the anterior portion of the neck, hindering its elevation during the act of swallowing, favoring the blocking of the expiratory air flow through the larynx and the desensitization of the larynx and pharynx^{5,19}.

The results of this study agree with the findings of the literature on the implications of the use of the cuff in the swallowing dynamics, especially regarding the swallowing functional evaluation with the cuff inflated. The presence of it influences on the protection mechanisms of airways by hindering the movement of elevation and anterior displacement of the hyolaryngeal complex and desensitization of the laryngopharynx.

Referring to consistency in food, pasty one can be the safest, as being cohesive it becomes easier to be controlled in the oral cavity. However, depending on each case, it is possible to test other consistencies¹³. In the functional evaluation of swallowing, it is necessary to check parameters, patient's level of consciousness, general medical conditions, in addition to medical clearance. The test with food is cautiously performed, with careful choice of food consistency⁹. In accordance with dysphagia degree, the diet will be altered to reduce the risk of aspiration. It is necessary to understand the importance of texture to the formulation of diets in dysphagia, since it influences food acceptance.

Food should be modified, giving softness, like that found in purees, porridges and blender recipes, according to the ability of the patient's swallowing and speech diagnosis. At the same time, it must be attractive as a standard meal and nutritionally complete²⁰. There was disagreement between the results of this study with those found in the literature with regard to the food consistency of choice for

initiation of swallowing functional evaluation. It is believed that the researchers may be interpreted thick liquid consistency as pasty one, reported in the literature as the safest food consistency for testing. Another factor to be considered is the possibility of subjective interpretation as to the nomenclature, since it differs among services.

The selection of the tracheostomy tube type should be careful, as studies affirm^{5,19}, it is possible to choose from size, angle, to the product material most suitable for each patient. Other studies claim that the type and size of the cannula and the status of the cuff interfere in the functioning of swallowing^{2,21}, worsening performance in situations of cuff inflated and deflated respectively²⁰. However, some studies do not show correlation between the presence of tracheostomy and dysphagia^{22,23}.

There is agreement in this study with the literature concerning the type and size of cannula as implicating factors in changing the swallowing dynamics. It is known that in some places the cannula of the metal type is still the most used, which reinforces the findings of this study.

In the hospital routine, it is noted that the measurement of the cuff pressure is neglected by professionals. When it is performed, usually occurs by digital palpation of the external cuff, not being a reliable measure. Thus, it is necessary to measure the pressure by methods considered more secure and reliable as using cuff pressure manometers that are specific devices for measuring such pressures. Currently, studies show the need for measurement and maintenance of cuff pressures within the range considered normal, but little is described in the literature about the time when they should be verified. It is noteworthy that the Brazilian Consensus on Mechanical Ventilation suggests that this pressure analysis should be performed daily²⁴.

It is recommended that the cuff pressure against the walls of the trachea allows adequate capillary blood flow, not to exceed physiological values around 25 mmHg (30 cmH₂O), however, in clinical practice it is common that cuff measures are in disagreement with the recommended values in the literature^{6,23}. It is recommended to check the cuff pressure three times a day.

In the present study, when asked about the routine checking of cuff pressure in their clinical practice, only 10 (35.7%) respondents said that the cuff pressure is routinely checked in the service and is therefore compatible with the literature. Of these respondents, 20% said that pressure is checked more than once a day, 60% said that the pressure is measured daily and 20% said once a week. However, it is known that generally the measurement of the cuff pressure is neglected by many professionals,

and when the check is performed, this often occurs incorrectly, not being considered a reliable measure.

The signs considered to be complicating aspects in the process of decannulation, the following stood out: residues of saliva into the trachea, food residues in the trachea, change in color or appearance of the secretion, fever, worsening oxygenation and decreased level of consciousness. Residues of saliva and change in color or appearance of the secretion were not cited by 43% of the professionals who participated in this study and who had between 5 and 10 years of training. Fever was another complicating sign in the process of decannulation which was not cited by 55% of those who had up to 5 years of training and 57% of those who had between 5 and 10 years of training.

A study signaled the need for greater attention from the professionals involved in the care of tracheostomized patients for complicating alert signs such as residues of saliva and food, change in appearance and color of secretion, fever, and others⁶. Differently from the findings of this study, signs of residues of saliva, change in appearance and color of secretion and fever were not referenced as significant warning signs as limiting the process of decannulation.

It was also observed in this study that the majority of respondents, 71.4% said that interdisciplinary intervention is common in clinical work, contributing to the process of weaning from tracheostomy. A study showed that 66.66% of physiotherapists take the decision of decannulation process after the consensus of an interdisciplinary team. The physiotherapist, psychologist and speech therapist are professionals indispensable in this process¹⁵. Of the respondents, 71.4% (20) stated that interdisciplinary intervention is a common fact in their clinical work, thus accelerating the process of weaning from tracheostomy.

An article considers weaning from tracheostomy at the time when the cuff starts deflating, passing through the change from metal to plastic cannula (without cuff) until the removal of the tracheostomy tube and the realization of stoma occlusive dressings⁵.

One strategy used in the process of decannulation to promote a more favorable swallowing and

restore the patient's verbal communication involves the occlusion of tracheostomy tube^{19,20}. Another extremely useful feature in enabling verbalization and optimize swallowing is the speaking valve⁶. The benefits are related to the increase in blood oxygenation and ventilation, airway filtration preventing infections, decreased of secretions, increased of olfactory sensation, decreased of vocal effort, onset or resumption of speech with longer and stronger emissions as well as help in the process of weaning from the ventilator and/or tracheostomy tube¹.

In a particular study, the unidirectional speaking valve significantly reduced the incidence and severity of aspiration watery fluid, probably by restoring the subglottic air pressure and laryngeal awareness^{6,21}. However, in another study the incidence of aspiration was not affected by the occlusion of the tracheostomy tube and/or the use of the unidirectional speaking valve²⁰. In this study, it was noted a small number of speech therapists using the speaking valve as a therapeutic resource, despite the numerous benefits cited in the literature. It is assumed, in view of these findings that there are limitations to the acquisition of this resource, concerning bureaucratic and financial issues that impact on its use.

■ CONCLUSIONS

The criteria for speech evaluation in tracheostomized patient in hospital and home care in the city of Salvador, Bahia, mostly are in accordance with the criteria described in the literature.

However, there are few studies that establish criteria for decannulation and the decision regarding this procedure is still based on subjective judgments, with no standardized protocols for decannulation. Similarly happens with respect to the performance of the Blue Dye Test which is not a standard procedure and is also performed in a subjective manner. Therefore, it is suggested the necessity for further studies to validation protocols, facilitating better interdisciplinary performance in the process of decannulation and minimizing the risks of complications which will reflect in better performance of professionals with these patients.

RESUMO

Objetivo: conhecer os critérios utilizados pelos fonoaudiólogos na avaliação clínica do paciente traqueostomizado no leito hospitalar e/ou internamento domiciliar, da cidade de Salvador, Bahia. **Métodos:** trata-se de um estudo transversal, descritivo, de abordagem quantitativa, cuja população constituiu-se de 28 fonoaudiólogos, que contribuíram respondendo a um formulário contendo 19 questões sobre o tema Critérios para Avaliação Clínica Fonoaudiológica do Paciente Traqueostomizado no Leito Hospitalar e/ou Internamento Domiciliar (*home care*). **Resultados:** no presente estudo, em relação aos critérios selecionados primariamente para a prática clínica, os resultados foram: 26 (92,9%) estabilidade clínica; 24 (85,7%) nível de consciência; 24 (85,7%) estado de alerta; 14 (50%) capacidade de proteção de vias aéreas; 9 (32,1%) estado nutricional; 9 (32,1%) tosse; e 6 (21,4%) possibilidade de receber via oral. **Conclusão:** ao término do estudo realizado foi possível concluir que os critérios para avaliação fonoaudiológica no paciente traqueostomizado no leito, na cidade de Salvador, Bahia, em sua maioria, encontram-se de acordo com os critérios descritos na literatura. Contudo, existem poucos estudos que estabelecem critérios para a decanulação, portanto, ressalta-se a necessidade de validações de protocolos para uma melhor atuação do processo de decanulação desses pacientes.

DESCRIPTORIOS: Transtornos de Deglutição; Traqueostomia; Fonoaudiologia

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