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Effect of the chin-tuck maneuver on the safety of swallowing in supracricoid laryngectomy: a case series

Impacto da manobra flexão de cabeça na segurança da deglutição na laringectomia supracricóidea: uma série de casos

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Abstract

Purpose: to understand the impact of the chin tuck maneuver on swallowing function in individuals who underwent supracricoid laryngectomy with cricohyoidoepiglottopexy, and to identify clinical and sociodemographic factors associated with its effectiveness. **Methods:** a longitudinal study was conducted with patients who underwent supracricoid laryngectomy, identified through the flow of videofluoroscopic swallowing studies performed between 2021 and 2023. Swallowing was assessed in two conditions — at rest and during the chin tuck maneuver — using the Penetration–Aspiration Scale (Rosenbek, 1996). Clinical and sociodemographic variables were collected from medical records. Associations between these variables and swallowing outcomes were analyzed using the Chi-square test, adopting a 5% significance level and calculating effect size (Cramer's V). **Results:** a total of 17 patients were included, predominantly older adults (88.2%), male (88.2%), married (64.7%), with low educational level (64.7%), smokers (76.5%), and alcohol users (52.9%). Most presented moderately advanced tumor stages (84.4%) and preservation of both arytenoids (70.6%). Silent aspiration occurred in 17.6% of cases and penetration in 23.5%. The response to the maneuver was heterogeneous, with functional improvement (29.4%), no change (52.9%), and worsening (17.6%). A non-significant trend was observed between maneuver effectiveness and educational level ($p = 0.057$; Cramer's V = small effect). **Conclusion:** the chin tuck maneuver showed a variable impact on swallowing, being effective only for part of the patients and not significantly associated with the analyzed clinical or sociodemographic variables.

Keywords: Head and neck neoplasms; Laryngectomy; Deglutition disorders; Rehabilitation; Radiology

Resumo

Objetivo: compreender o impacto da manobra flexão de cabeça na deglutição de indivíduos submetidos à laringectomia supracricóidea com cricohioidoepiglotopexia e os fatores associados a sua eficácia. **Métodos:** estudo longitudinal de pacientes submetidos à laringectomia supracricóidea localizados por meio do fluxo dos exames radiológicos de videofluoroscopia entre 2021 e 2023. O exame foi realizado em repouso e, durante a realização da manobra de flexão de cabeça, avaliado com a escala Escala de Penetração e Aspiração (Rosenbek). Foram coletadas variáveis clínicas e sociodemográficas do prontuário. A associação entre essas variáveis e os desfechos funcionais foi verificada pelo teste do Qui-Quadrado, considerando nível de significância de 5% e tamanho de efeito (V de Cramer). **Resultados:** foram incluídos 17 pacientes, predominantemente idosos (88,2%), do sexo masculino (88,2%), casados (64,7%), com baixa escolaridade (64,7%), fumantes (76,5%) e etilistas (52,9%). Predominaram tumores de estadiamento moderadamente avançado (84,4%) e preservação de duas aritenoides (70,6%). A aspiração silente ocorreu em 17,6% dos casos e a penetração em 23,5%. A resposta à manobra foi heterogênea, com melhora funcional (29,4%), ausência de alteração (52,9%) e piora (17,6%). Observou-se tendência não significativa entre a efetividade da manobra e o nível de escolaridade ($p = 0,057$; V de Cramer = efeito pequeno). **Conclusão:** a manobra de flexão de cabeça apresentou impacto variável sobre a deglutição, sendo efetiva apenas para parte dos pacientes e não associada de forma estatisticamente significativa às variáveis clínicas ou sociodemográficas avaliadas.

Palavras-chave: Câncer de cabeça e pescoço; Laringectomia; Transtornos de deglutição; Reabilitação; Radiologia

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INTRODUCTION

Partial laryngectomies are surgical techniques developed for the treatment of moderately advanced tumors, with the aim of partially preserving respiratory, phonatory, and swallowing functions[1]. Over recent decades, two techniques have become more refined within the field of partial laryngeal surgery: laser microsurgery, which has replaced vertical procedures, and horizontal procedures, particularly supracricoid laryngectomy (SCL)[2].

SCL consists of resection of the lower portion of the epiglottis, thyroid cartilage, laryngeal ventricles, vocal folds, ventricular folds, paraglottic space, and pre-epiglottic space, while preserving the cricoid cartilage, hyoid bone, part of the epiglottis, and at least one arytenoid cartilage. Reconstruction is performed by means of cricohyoidoepiglottopexy (CHEP)[1,3,4].

Dysphagia and dysphonia are the main sequelae of SCL due to removal of the vocal folds, partial loss of the protective mechanisms of the lower airway, and the potential risk of pulmonary complications caused by episodes of chronic aspiration and pharyngeal residue. The methodology of studies on dysphagia after this procedure is inconsistent, and the new physiology of swallowing remains poorly described. Reports suggest that the tongue base is the main compensatory mechanism for glottic closure[5,6]. Nevertheless, there is consensus that, after rehabilitation, patients are able to maintain exclusive oral feeding and hydration, even though episodes of laryngeal penetration and aspiration may occasionally occur throughout life. Dysphagia may be present in up to 100% of patients in the immediate postoperative period and chronically in approximately 40% during late follow-up[3,5,7].

Despite the various functional swallowing impairments already described, such as delayed opening of the laryngeal vestibule and upper esophageal sphincter, reduced resting pharyngeal area, inadequate pharyngeal constriction, and altered hyoid bone angulation[6,7], there is a scarcity of studies aimed at understanding possible therapeutic strategies to minimize this dysfunction. As a result, specialists often work with limited scientific evidence and uncertainty when developing an assertive therapeutic plan[7-10].

Several strategies have been proposed for dysphagia intervention. Some produce long-term effects, such as myofunctional exercises, whereas others provide immediate results, such as postural maneuvers[5,6,11]. The head flexion strategy is the postural maneuver most frequently used by speech-language pathologists in the management of oropharyngeal dysphagia[11,12].

According to Logemann[11], the head flexion maneuver (chin tuck) consists of instructing the patient to bring the chin toward the chest and maintain this position during swallowing. This maneuver has been described as not altering swallowing physiology itself, but rather modifying pharyngeal dimensions. Descriptions of this maneuver have been found in the literature for approximately 60 years[11]. It is widely used in patients with dysphagia of different etiologies, especially in situations in which dysphagia is acute and severe.

A growing body of studies has examined this maneuver in neurological patients, for whom its indication is advocated in cases of dysphagia characterized by delayed initiation of the pharyngeal swallow, reduced laryngeal closure, reduced tongue base retraction, and/or decreased epiglottic inversion. Despite its broad use in clinical practice, its effects remain controversial. Some authors have not reported significant changes in pharyngeal contraction and have even pointed to certain disadvantages in swallowing dynamics[11-14].

Given its indications in neurological patients, a similar beneficial effect might be expected in other groups. However, studies on head flexion in other dysphagia etiologies remain scarce.

Ambiado-Lillo[15] conducted a systematic review aimed at understanding the impact of craniocervical posture on swallowing biomechanics and found that positioning plays a determining role by influencing muscle activation and hyoid kinematics. The author emphasized that head flexion may improve laryngeal vestibule closure and reduce aspiration risk, although results vary according to the type of functional impairment, muscle fatigue, and the patient's degree of adaptation. This heterogeneity highlights the need to individually assess the effect of the maneuver in different clinical groups, such as patients with head and neck cancer.

In oncology patients, functional outcomes are heterogeneous and unpredictable, even among those who undergo similar procedures. Studies related to therapeutic strategies such as swallowing maneuvers remain controversial[3,4,6,7,13,14]. In a prospective case-series study, Bagwell et al.[16] reported that a patient who underwent supracricoid laryngectomy and presented chronic dysphagia and silent aspiration of thin liquids did not improve with the head flexion maneuver, with aspiration resolving only after the supraglottic swallow maneuver.

Due to the inconsistency regarding its effects and the relevance of this strategy as one of the first choices in swallowing rehabilitation, further studies are needed to understand its impact on swallowing and the factors associated with its effectiveness in different surgical groups[7,8,12,15].

Considering that this surgical technique is associated with a high prevalence of dysphagia and that head flexion is frequently used, indicators of its applicability are urgently needed. The aim of the present study was to understand the impact of the head flexion maneuver on swallowing in individuals who underwent supracricoid laryngectomy with cricohyoidoepiglottopexy and the factors associated with its effectiveness.

METHODS

This was a longitudinal study involving patients with laryngeal cancer enrolled in the Head and Neck Cancer Surgery Section of the Brazilian National Cancer Institute (INCA). Approval for the study was obtained from the institution's Research Ethics Committee under protocol number 26331314.2.0000.5274. All participants signed an informed consent form.

Individuals older than 18 years who had undergone SCL-CHEP performed by a single surgical team, were under outpatient follow-up, had no local recurrence or distant metastases, and had already completed speech-language rehabilitation and been discharged were included. Therefore, all participants were at least six months postoperative. Non-cooperative patients, including those with language and/or cognitive impairments, and those who had undergone another surgical intervention in the head and neck region before or after SCL were excluded.

Patients were identified through the outpatient follow-up videofluoroscopic swallowing study workflow of the institution's Head and Neck Surgery Service between November 2021 and February 2023.

The following clinical and sociodemographic variables were collected from medical records: age, sex, marital status, educational level, smoking, alcohol consumption, tumor stage, radiotherapy, arytenoid preservation, and presence of tracheostomy. Age was categorized into three groups: younger than 60 years, 60 to 69 years, and 70 years or older. The remaining variables were classified according to standardized clinical records as follows: radiotherapy (yes/no), arytenoid preservation (one/two), tracheostomy (yes/no), marital status (single/married), educational level (elementary or secondary education/higher education), smoking (yes/no), and alcohol consumption (yes/no).

Videofluoroscopic swallowing study (VFSS) was the method chosen for evaluation and was performed using a Siemens Axion Iconos MD remote-controlled X-ray system (Serial Number 13020). Analysis was conducted using the Penetration-Aspiration Scale (PAS), developed by Rosenbek in 1996 and described in Chart 1[11,17]. Thus, after completion of the examination, the evaluators identified the presence or absence of contrast penetration or aspiration by means of the scale.

The contrast was offered in a cup, using a 100% barium sulfate (Bariogel®) dilution with mineral water. It was offered under free handling as a thin liquid in a volume of 20 mL, prepared by mixing 10 mL of water and 10 mL of barium sulfate. During the examination, all individuals were seated in the lateral view, as close as possible to the tabletop and image intensifier, in order to avoid distortion of the fluoroscopic image. Images were captured at rest and during performance of the head flexion maneuver.

The maneuver was instructed by two trained speech-language pathologists with experience in the field. Patients were asked to swallow a "comfortable sip", defined as a volume of liquid equivalent to their usual pattern without discomfort, with the chin on the chest in the head-flexed position. If there was difficulty understanding the instruction, a demonstration was provided[11,12,15]. As described by Logemann in 1998, the head flexion maneuver (chin tuck) consists of having the patient bring the chin toward the chest during swallowing and maintain this posture throughout the act of swallowing[11].

All patients had previously undergone training in this maneuver at some point during rehabilitation. Therefore, all were already familiar with this lower airway protective strategy, as it is part of the institution's swallowing rehabilitation therapeutic protocol.

Classification of swallowing findings was carried out by two experienced speech-language pathologists who independently analyzed the videofluoroscopic recordings. In the event of disagreement, a third evaluator would be consulted for consensus. However, this was not necessary, as there were no inconsistencies between examiners.

Statistical analysis

Comparisons between conditions before and after the head flexion maneuver were performed using McNemar's exact test for the binary aspiration outcome. The PAS score, being ordinal in nature, was analyzed using paired nonparametric procedures (sign test) and complemented by Cliff's Delta effect size.

Associations between clinical and sociodemographic characteristics and swallowing outcomes were evaluated using contingency tables, with Fisher's exact test for dichotomous variables and Cramér's V to estimate the magnitude of associations. The significance level adopted was 5%.

RESULTS

Seventeen patients were evaluated during the study period, with a mean age of 67.6 years (standard deviation: 10.1), a median of 71 years, and a range from 38 to 81 years. The group was predominantly male (88.2%), married (64.7%), had low educational attainment (64.7%), and included smokers (76.5%) and alcohol users (52.9%). Six individuals had a family history of cancer (35.3%) (Table 1).

All histopathological reports were consistent with squamous cell carcinoma. There was a predominance of intermediate/advanced-stage laryngeal tumors (n = 14; 84.4%). Bilateral selective neck dissection was performed in all patients.

Two arytenoids were preserved in 70.6% of the individuals, and the occurrence of postoperative fistula and wound infection was 5.9% and 11.8%, respectively.

At the time of swallowing assessment, all patients had exclusive oral nutrition and hydration and were at least six months postoperative. Only 2 patients (11.8%) had a tracheostomy at the time of the examination.

Table 2 shows the PAS results during swallowing at rest and after performance of the maneuver, as well as the presence or absence of aspiration for each patient. A prevalence of 17.6% silent aspiration was observed (Table 2).

As shown in Table 2, 9 patients (52.9%) maintained the same swallowing pattern, that is, they showed no changes after the maneuver (patients 1, 4, 7, 11, 12, 14, 15, 16, and 17). Five patients (29.4%) showed functional gains with the maneuver:

Chart 1. Penetration-Aspiration Scale (PAS) developed by Rosenbek et al. in 1996[17]

Classification		Findings on imaging examination
-	1	Contrast does not enter the airway.
PENETRATION	2	Contrast enters the airway, remains above the vocal folds, with no residue.
	3	Contrast remains above the vocal folds, with visible residue remaining.
	4	Contrast reaches the vocal folds, with no residue.
	5	Contrast reaches the vocal folds, with visible residue remaining.
ASPIRATION	6	Contrast passes below the glottic level, but there is no residue at the subglottic level.
	7	Contrast passes below the glottic level with residue at the subglottic level, despite the patient's response.
	8	Contrast passes through the glottis with residue in the subglottis, without any patient response.

Table 1. Distribution of sociodemographic and clinical data of 17 patients submitted to supracricoid laryngectomy

Variables	Total n(%)
Age	
Younger than 60 years	2 (11.8)
60 to 69 years	6 (35.3)
70 years or older	9 (52.9)
Sex	
Female	2 (11.8)
Male	15 (88.2)
Marital status	
Single	6 (35.3)
Married	11 (64.7)
Educational level	
Elementary education	11 (64.7)
Secondary/Higher education	6 (35.3)
Smoking	
No	4 (23.5)
Yes	13 (76.5)
Alcohol consumption	
No	8 (47.1)
Yes	9 (52.9)
Tumor stage	
I	3 (17.6)
II	6 (35.3)
III	8 (47.1)
Radiotherapy	
No	14 (82.4)
Yes	3 (17.6)
Arytenoid	
Two	12 (70.6)
One	5 (29.4)
Tracheostomy	
No	15 (88.2)
Yes	2 (11.8)

patients 2, 6, and 10 no longer presented penetration, whereas patients 8 and 9 no longer aspirated. Three patients (17.6%) experienced worsening of swallowing during the requested maneuver: patient 3 developed penetration, whereas patients 5 and 13 changed from functionally safe swallowing at rest to large-volume aspiration during the maneuver.

None of the 17 individuals in the study showed improvement or gain in the amplitude of epiglottic inversion during performance of the maneuver.

Table 3 presents the paired comparison of swallowing before and after the head flexion maneuver. Among the 17 patients evaluated, the aspiration rate was 17.6% both before and after the maneuver. McNemar's exact test indicated no significant difference ($p = 1.00$; OR = 1.00; 95% CI 0.17-5.77; Cohen's $g = 0.00$).

In the analysis of associations between clinical/sociodemographic variables and swallowing status at rest according to the PAS, improvement was observed in 5 patients (29.4%), worsening in 3 (17.6%), and no change in 9 (52.9%), with Cliff's Delta = 0.25 and $p = 0.73$, indicating a slight trend toward overall improvement (Table 4).

Regarding associations between clinical/sociodemographic variables and the effectiveness of the head flexion maneuver according to PAS findings at rest, marital status was associated with worse swallowing among single individuals ($p = 0.032$; Cramér's V = 0.30). A non-significant trend was observed between maneuver effectiveness and educational level ($p = 0.057$; Cramér's V = 0.66), suggesting higher PAS scores, that is, worse swallowing performance, among patients with lower educational attainment. The remaining variables showed only small to moderate effects (Cramér's $V \leq 0.48$) (Table 5).

Table 2. Distribution of functional swallowing outcomes by patient at rest and after performing the head flexion maneuver (n=17)

Patient	Baseline Swallowing		Swallowing During Maneuver	
	PAS	Aspiration	PAS	Aspiration
1	8	1	8	1
2	5	0	4	0
3	4	0	5	0
4	4	0	4	0
5	4	0	8	1
6	5	0	4	0
7	4	0	4	0
8	8	1	4	0
9	8	1	4	0
10	5	0	4	0
11	4	0	4	0
12	4	0	4	0
13	4	0	8	1
14	5	0	5	0
15	4	0	4	0
16	4	0	4	0
17	4	0	4	0

Subtitle: 1 = yes; 0 = no; PAS = Penetration-Aspiration Scale (Rosenbek)

Table 3. Paired comparison of swallowing before and after the head flexion maneuver (n = 17)

Outcome	Before the maneuver	After the maneuver	Test	p-value	Effect size	95% confidence interval
Aspiration (yes/no)	17.6% / 82.4%	17.6% / 82.4%	McNemar (exact)	1.00	OR = 1.00	0.17 – 5.77
PAS score (mean ± SD)	—	—	Sign test (paired)	0.73	Cliff's $\delta = 0.25$	—

Subtitle: PAS = Penetration-Aspiration Scale (Rosenbek); SD = Standard deviation

Table 4. Associations between clinical/sociodemographic variables and swallowing status at rest according to the Penetration-Aspiration Scale (Rosenbek)

Variable	Cramér's V	Interpretation	Observation
Sex	0.34	Small to moderate effect	—
Marital status	0.30	Small effect	Single patients → worse status (p = 0.032)
Preserved arytenoid	0.28	Small	—
Educational level	0.25	Small	—

Table 5. Associations between clinical/sociodemographic variables and the effectiveness of the head flexion maneuver according to the Penetration-Aspiration Scale (Rosenbek)

Variable	Cramér's V	Interpretation	Observation
Educational level	0.66	Strong effect	Trend (p = 0.057) – patients with lower educational level had worse PAS scores
Arytenoid	0.60	Moderate	—
Age	0.48	Moderate	—
Radiotherapy	0.47	Moderate	—
Tracheostomy	0.44	Small to moderate	—

Subtitle: PAS = Penetration-Aspiration Scale (Rosenbek)

DISCUSSION

The aim of the present study was to evaluate the effectiveness of the head flexion maneuver on swallowing in individuals who underwent SCL with cricohyoidoepiglottopexy and the factors associated with this response. The maneuver was not effective in all patients, showing heterogeneous results: some patients benefited, others showed no changes, and others presented severe swallowing impairment during maneuver performance. These findings highlight the relevance of objective swallowing examinations in this group of patients to support individualized therapeutic planning.

The literature already reports a chronic dysphagia rate of approximately 40% in individuals who undergo partial laryngectomies during late follow-up[3,7,10]. In the group evaluated, silent aspiration and penetration showed prevalences of 17.6% and 23.5%, respectively. This finding reinforces the need to study therapeutic strategies aimed at improving swallowing management in order to promote patient safety and quality of life[5].

More than half of the individuals showed no change in swallowing pattern during the maneuver. Among these, patient 1 maintained silent aspiration during head flexion. Three patients, nearly 20% of the sample, experienced worsening of swallowing during the requested maneuver, with penetration and aspiration. The literature describes that the head flexion maneuver alters pharyngeal spaces despite not modifying swallowing physiology itself[11,12]. It may therefore be assumed that this mechanism alone is insufficient to compensate, uniformly in all individuals, for the damage resulting from treatment.

Studies on therapeutic strategies in patients with head and neck cancer can be found in the literature, mainly regarding the supraglottic swallow, super-supraglottic swallow, effortful swallow, Mendelsohn maneuver, Masako maneuver, and Shaker exercise[6,13,14,18-22]. There are numerous reports on patients treated with radiotherapy and only limited descriptions of therapy in patients who underwent partial laryngectomy[14,16]. Although it is the most common protective strategy in speech-language rehabilitation of patients with head and neck cancer, the head flexion maneuver has low-level evidence in the literature, with inconclusive and conflicting results[13,16,21].

Patients who undergo a partial laryngeal procedure exhibit impaired neolaryngeal closure due to partial loss of protective mechanisms resulting from resection of approximately 70% of the organ[1,2,6,10]. In a prospective case-series study conducted in 2015, Bagwell et al.[16] presented the case of a patient who underwent SCL with evidence of chronic dysphagia and silent aspiration of thin liquids. The individual did not benefit from the head flexion maneuver, and aspiration resolved only after the supraglottic swallow maneuver.

There are several aspects of the new swallowing physiology that must be considered in speech-language therapy and that the head flexion maneuver is unable to address, such as delayed opening of the laryngeal vestibule and upper esophageal sphincter, incomplete neoglottic closure, and inadequate pharyngeal constriction[7].

Studies indicate that supraglottic and super-supraglottic maneuvers promote greater movement amplitude and longer duration of neoglottic closure, which may favor lower airway protection and compensate for structural losses after SCL[6].

In 2001, Lewin et al.[22] evaluated 26 patients after pharyngectomy by means of videofluoroscopic swallowing study and found an aspiration prevalence of 81% (n = 21). Of these, 17 (81%) no longer aspirated during the head flexion maneuver. This result differs from that observed in patients after SCL, likely due to the distinct origin of dysphagia in these groups, resulting from resection of different anatomical regions. In pharyngectomy, the structures responsible for laryngeal closure and airway protection are preserved. It is therefore important to identify the correct selection of therapeutic strategies according to the anatomical and functional origin of aspiration and penetration[6,22].

In studies of swallowing in neurogenic dysphagia, the head flexion maneuver is widely recognized for promoting enlargement of the vallecular and pharyngeal spaces and facilitating epiglottic inversion into a more protective position over the airway entrance[18]. In SCL, resection removes the epiglottic pedicle, and epiglottopexy fixes the epiglottis to the cricoid cartilage and hyoid bone, which may impair its inversion[5-7]. Despite these functional impairments, the epiglottis remains an important protective component of the airway in SCL. None of the 17 individuals in the study showed improvement or gain in the amplitude of epiglottic inversion during the maneuver.

All patients had previously been instructed in and were familiar with the head flexion strategy. Even with this prior training before assessment, the effectiveness of the maneuver during swallowing showed a non-significant trend toward association with educational level, suggesting an influence of comprehension and correct execution of the technique. No clinical or sociodemographic variable showed a significant association with the benefits of the maneuver.

In a study conducted with 385 individuals with head and neck cancer, the authors concluded that lower cognitive capacity is associated with frailty, malnutrition, and possible impairment of oral intake[23]. If the individual does not adequately understand how to perform the maneuver and/or presents some degree of cognitive impairment, patient safety may be compromised and therapeutic options may be limited.

The new anatomy may produce adverse and unpredictable results, which reinforces the need for objective swallowing examinations to detect asymptomatic functional deficits and identify appropriate therapeutic strategies, as well as to ensure effective and ongoing understanding by the patient and family regarding the therapeutic resources provided, including guidance, exercises, and maneuvers.

Five patients, approximately 30%, showed functional gains with the maneuver, with resolution of penetration and aspiration. In patients who underwent SCL, the head flexion maneuver may have contributed to neoglottic closure due to changes in its angulation during downward head inclination. In one study, the authors stated that hyoid bone angulation in SCL may assist swallowing safety by allowing the neoglottis to be covered by the tongue base at the moment of maximal pharyngeal constriction, thereby favoring laryngeal vestibule closure and protecting the patient against penetration and aspiration during swallowing[6].

In a systematic review conducted in 2009, McCabe et al.[13] identified only five studies aimed at examining different maneuvers used in patients with head and neck cancer. A limited number of studies was observed, with samples based on single-case studies or case series, heterogeneous characteristics regarding treatment and tumor location, inconsistent evaluation methodologies, and limited scientific evidence. The authors emphasized the urgent need for studies involving populations with oral, pharyngeal, or laryngeal cancer, due to the frequent use of these strategies without adequate support and safety in heterogeneous groups, and highlighted the need for appropriate indicators of effectiveness.

In a study conducted with dysphagic patients of neurological origin, the head flexion maneuver proved ineffective, especially in cases of reduced strength of the facial and masticatory muscles and weak or incomplete lip seal during swallowing[12].

It is known that oropharyngeal dynamics may be impaired due to the pexy performed after SCL, with reduced tongue mobility, resulting in unsatisfactory oral motor control, especially in the immediate postoperative period. It is believed that oral motor deficits may also underlie difficulties in performing the maneuver in patients who underwent SCL[3,6,7].

This study had some limitations, such as the absence of a control group and the small number of participants. Future studies are needed to investigate all therapeutic strategies across different treatment modalities in patients with head and neck cancer, given their singular characteristics.

Authors describe the head flexion postural maneuver as a technique recommended on the basis of clinical evaluation and report that approximately 50% to 90% of speech-language pathologists use this resource in bedside assessments and therapies[14].

Heterogeneous results were observed in the present case series, highlighting the relevance of objective swallowing examinations when indicating the head flexion maneuver in patients who underwent partial laryngectomy.

At present, new discussions among swallowing specialists regarding anatomophysiology underscore the importance of understanding and considering the variability of individual anatomical relationships and their impact on swallowing function[24]. Although the surgical procedure is well described in the medical literature, each patient is unique, with asymmetric and individualized functional and structural outcomes.

CONCLUSION

The head flexion maneuver showed no statistically significant association with the clinical and sociodemographic variables analyzed in patients under outpatient follow-up after supracricoid laryngectomy. A slight trend toward a better functional response was observed among individuals with higher educational attainment, although this finding did not reach statistical significance.

Overall, the maneuver demonstrated limited compensatory potential, being effective for some patients but not decisive for overall swallowing improvement after supracricoid laryngectomy, with heterogeneous results: some patients benefited, others showed no changes, and others presented severe swallowing impairment during performance of the maneuver. These findings reinforce the need for further studies with larger samples, effect-size analyses, and control of clinical variables in order to confirm or refute the observed trend and contribute to the refinement of therapeutic management.

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