

# Stomatognathic functions and face and neck burns: systematic review

## Funções estomatognáticas e queimaduras em face e/ou pescoço: revisão sistemática da literatura

## Funciones estomatognáticas y quemaduras en cara y/o cuello: revisión sistemática de la literatura

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### **Abstract**

**Objective:** To describe the changes in the functions of the stomatognathic system of patients that suffered burns on the face and/or neck. **Method:** This is a systematic review of the literature. The search was performed through the Virtual Health Library (VHL) and manual search, using the descriptors: burn, swallowing, chewing, breathing, talking, sucking, and suction. We included the articles published between 2008 and 2018 that described stomatognathic functions observed after burns of face and/or neck. The number of participants, gender, age, etiology and degree of burn, burned body race and altered stomatognathic functions after burn were extracted by the analyses. **Results:** Of the 377 articles identified in the databases, 8 were selected. In addition, 3 were selected by manual search, resulting in 11 articles included. The majority of subjects were male, aged between 2 and 85 years. The body burn was performed in 5 and 80%, first of a third degree, being the majority thermal burns. Six articles describe changes in deglutition, five relate breathing impairment, three cited alteration in the articulation of speech, two in chewing and of facial expression. None cited change in sucking. **Conclusion:** Changes in the stomatognathic system after burn on the face and/or neck, according to the analyzed articles, where most frequently related to swallowing and breathing, especially due to post-burn edema and

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### **Authors' contributions:**

BEM, EMG and KFL contributed with data collection, analysis, writing and review of the manuscript..

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restriction of mobility due to hypercycatrization. Changes in speech, mastication and facial expression were observed too.

**Keywords:** Burns; Speech, Language Pathology and Audiology; Stomatognathic System

## Resumo

**Objetivo:** Descrever as alterações nas funções do sistema estomatognático de indivíduos que sofreram queimaduras em face e/ou pescoço. **Método:** Trata-se de uma revisão sistemática da literatura. A pesquisa foi realizada por meio da Biblioteca Virtual em Saúde (BVS) e busca manual, utilizando-se os descritores: queimadura (*burn*), deglutição (*deglutition*), mastigação (*mastigation*), respiração (*respiration*), fala (*speech*), sucção (*sucking, suction*). Foram selecionados artigos publicados entre 2008 e 2018 que descreveram funções estomatognáticas após queimaduras em face e/ou pescoço. Para análise, foram extraídas informações quanto ao número de participantes, sexo, idade, etiologia e grau da queimadura, superfície corporal queimada e características de funções estomatognáticas pós-queimadura.

**Resultados:** Dos 377 artigos identificados nas bases de dados, oito foram selecionados. Além destes, três foram selecionados por meio de busca manual, totalizando a inclusão de 11 artigos. A maioria dos participantes era do sexo masculino, com idade entre dois e 85 anos. Foram descritas queimaduras com superfície corporal queimada entre cinco e 80%, de primeiro a terceiro grau, sendo a maioria queimadura térmica. Seis artigos descreveram alteração na deglutição, cinco relataram alteração na respiração, três na articulação da fala, dois na mastigação e dois referiram comprometimento da mímica facial. Nenhum citou alteração na sucção. **Conclusão:** As alterações no sistema estomatognático decorrentes de queimaduras em face e/ou pescoço mais descritas na literatura analisada foram relacionadas à deglutição e à respiração, especialmente devido a edema pós-queimadura e restrição de mobilidade causada por hiper cicatrização. Alterações na fala, mastigação e mímica facial também foram observadas.

**Palavras-chave:** Queimaduras; Fonoaudiologia; Sistema Estomatognático.

## Resumen

**Objetivo:** Describir los cambios en las funciones del sistema estomatognático de individuos que sufrieron quemaduras en cara y/o cuello. **Método:** Se trata de una revisión sistemática de la literatura. La búsqueda fue realizada por medio de la Biblioteca Virtual en Salud (BVS) y búsqueda manual, utilizando los descriptores: quemadura (*burn*), deglución (*deglutition*), masticación (*mastigation*), respiración (*respiration*), habla (*speech*) y succión (*sucking, suction*). Se incluyeron los artículos publicados entre 2008 y 2018 que describieron funciones estomatognáticas después de quemaduras de cara y/o cuello. Para el análisis, fueron extraídos datos referentes al número de participantes, sexo, edad, etiología y grado de la quemadura, superficie corporal quemada y características de funciones estomatognáticas alteradas post-quemadura. **Resultados:** De los 377 artículos identificados en las bases de datos, 8 fueron seleccionados. Además, 3 fueron seleccionados por **búsqueda manual, totalizando 11 artículos.** La mayoría de los participantes eran del sexo masculino, con edad entre dos y 85 años con superficie corporal quemada entre cinco y 80%, entre primer a tercer grado, siendo la mayoría quemadura térmica. Seis artículos describieron alteraciones en la deglución, cinco problemas en la respiración, tres en la articulación del habla, dos en la masticación y dos refirieron comprometimiento de la mímica facial. Ninguna publicación citó alteración en la succión. **Conclusión:** Las alteraciones en el sistema estomatognático post-quemaduras de cara y/o cuello mas descritas en la literatura analizada, fueron relacionadas a la deglución y a la respiración, especialmente debido a edema post-quemadura y a restricción de movilidad por hiper cicatrización. También se observaron alteraciones en el habla, masticación y mímica facial.

**Palabras claves:** Quemaduras; Fonoaudiología; Sistema Estomatognático.

## Introduction

Burns are lesions of organic tissues, caused when the body receives more energy than it can absorb. Generally, they are caused by biological, thermal, chemical, electrical or radioactive agents<sup>1</sup>. These can reach and totally or partially destroy the skin and/or mucous membranes, as well as deeper structures such as muscles, tendons and even bones. Many times they are often associated with anatomical, physiological, endocrine and immunological alterations<sup>2</sup>.

Burns can be classified according to the depth of tissue loss, extent of the affected area, etiology and severity<sup>3</sup>. Depending on these aspects, there may be greater or lesser impairment of the functions performed in the affected region.

As for depth, burns can be classified according to the compromise of the constituent layers of the skin. It is considered a burn of: 1st degree, when it reaches only the epidermis, evolving with desquamation, without leaving scars; 2nd degree, when there is total involvement of the epidermis and partial dermis, with healing between two and four weeks; 3rd degree, when it affects the whole dermis and reaches subcutaneous tissues, with destruction of nerves, hair follicles and sweat glands, and can even affect muscles, tendons, ligaments and bone structures, and there is a decrease in tissue elasticity, making the tissue rigid<sup>4,5</sup>. In that degree, there is no spontaneous regeneration, thus the necessity of grafting of the skin. In most cases there are deforming lesions and irreversible sequelae<sup>6</sup>.

Another essential aspect is the extent of the burned body surface. This should be evaluated as accurately as possible because it is one of the factors that influence the systemic repercussion of burn and patient survival<sup>7</sup>.

Burns reaching the facial and/or cervical region can be considered the most serious, as they affect structures with great anatomical and functional complexity, as well as being subject to complications<sup>8</sup>. Another aggravating factor caused by burns in these regions is the inhalation of toxic gases, which are considered irritants and can cause inflammation, edema in the tracheobronchial mucosa and impair airway permeability<sup>9</sup>.

Burns on the face and neck often cause functional changes in the muscles responsible for facial expressions as well as in muscles responsible for the range of cervical movements. In more severe

cases, the cicatricial process can lead to functional insufficiency of the orofacial muscular structures due to tissue retraction. Especially when hypertrophic and keloid scars form, there may be a greater reduction in the movements and functions of the stomatognathic system, compromising sucking, chewing, breathing, swallowing and speech<sup>10-12</sup>.

Caring for the burned patient should occur in a multidisciplinary way. The speech-language pathologist is the professional responsible for evaluating and treating orofacial motor alterations, seeking to recover miofunctional balance<sup>11</sup>.

As a consequence of the above, this article aims to describe the changes in the functions of the stomatognathic system of individuals who suffered burns to the face and/or neck, according to a systematic review of the literature.

## Method

The design of the bibliographic research constituted a systematic review of the literature, conducted through the search of articles answering the question: "What are the changes in stomatognathic system functions found in individuals who have suffered burns to the face and/or neck?"

The search for articles was carried out through the Virtual Health Library (VHL), which includes electronic databases, considered vast range nationally and internationally, such as the Medical Literature Analysis and Retrieval System Online (MEDLINE / PubMed), Scientific Electronic Library Online (SCIELO) and Latin American and Caribbean Literature in Health Sciences (LILACS).

The research was carried out by means of the combination of the following descriptors in English, making use of the Boolean operator "AND": 1. Burn AND swallowing; 2. Burn AND chewing; 3. Burn AND respiration; 4. Burn AND speech; 5. Burn AND suction; 6. Burn AND sucking. The expressions were entered individually for search in all search fields [all fields], except in the "author" field [NOT author Burns].

Also, a manual search was performed in the reference lists of selected articles and in Google Scholar®, in order to contemplate other articles published in journals not located or not indexed in the mentioned databases. The aforementioned search expressions were used separately.

The selection was made in four steps. In the first, the descriptors were combined to obtain the

available articles on the subject. In the second, the duplicate publications in the databases were excluded. In the third step, the inclusion and exclusion criteria were applied. In the fourth and last step, a Google Scholar® search was carried out and an inquiry was made to the list of bibliographic references of selected articles to verify the inclusion of other articles.

The steps were carried out separately by two researchers and the inclusion and exclusion criteria were initially applied by the analysis of the titles, followed by the reading of the abstracts and finally by the analysis of the publications in their entirety.

Scientific articles published in Portuguese, English and Spanish were included between 2008 and 2018 in order to understand recent publications describing at least one of the functions of the stomatognathic system after face and/or neck burn.

Methodological studies and bibliographic reviews were excluded. Excluded also were articles on only inhaled burns, burns due to fluid ingestion or radiotherapy, burns that did not directly affect the stomatognathic system (such as burns on the scalp or ears), burns with diagnosis of neurological alterations and/or associated syndromes, and individuals submitted to surgical procedures or of

another order that, independently of the burn, could compromise the stomatognathic functions.

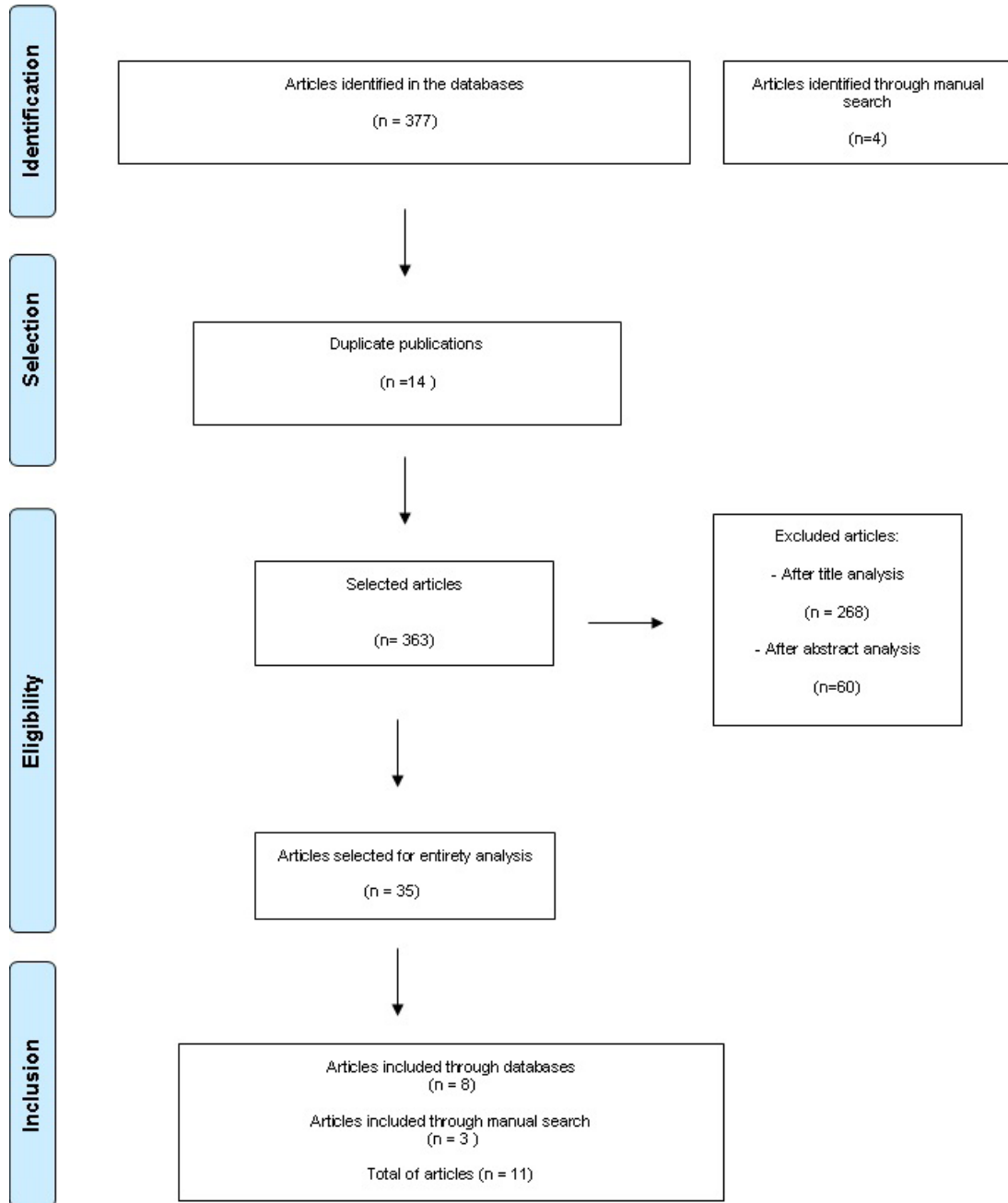
For descriptive analysis, the following studies were selected: number of participants, sex, age, etiology and degree of burn, burned body surface and altered stomatognathic functions after burns.

## Results

We identified 377 articles in the databases and four articles through manual search. After the removal of the duplicate publications and application of the selection criteria, 11 articles were included (Figure 1).

The number of participants varied between 1 and 876 individuals. Most were male, aged between 2 and 85 years, and mainly participants in cross-sectional studies or case studies.

Principally described were thermal burns, with a body surface burned between 5 and 80%, from first to third degree. Six publications described changes in swallowing, five reported changes in respiration, three in speech articulation, two in chewing and two reported impaired facial mimicry. No study has reported suction change (Figure 1).



**Figure 1.** Flowchart of articles included in a systematic review of the literature on changes in post-burning face and/or neck positions, 2008-2018

**Table 1.** Description of the number of participants, sex, age, etiology and degree of burns, burned body surface, and changes in functions of the post-burned face and/or neck post-burning system, second systematic review of literature, 2008-2018 (n = 11)

| Article                              | Study type            | Objective  | Sample | Sex (n)                  | Age (years)  | Burn etiology   | Burn degree  | Body surface burned (%)              | Functions of the stomatognathic system altered after face and/or neck burn   |
|--------------------------------------|-----------------------|--|--------|--------------------------|--------------|---|--------------|--------------------------------------|--|
| Turczinski et al, 2008 <sup>10</sup> | Cross-sectional study | To evaluate the voice of individuals affected by burns on the face and neck.   | 12     | Female (4) and Male (8). | Not reported | Overheated liquids, flames, flammable liquid, explosion | 2nd and 3rd  | 5 to 40                              | Change in speech (articulation of speech reduced in 10 participants, 4 participants demonstrated insufficient resupply and 5 use of reserve air) |
| Alcántara et al, 2009 <sup>13</sup>  | Cross-sectional study | To evaluate the facial mimetics of children with face burn.  | 5      | Male                     | 2 to 10      | Thermal and chemical                                    | 2nd          | 10 to 35                             | Absence of movement of some facial mimetic muscles after thermal burns. Minor change after chemical burns.                                       |
| Tsunoda e Masuda, 2009 <sup>14</sup> | Case study            | Report the case of a young man of 18 with burns on the tongue after using a tanning machine  | 1      | Male                     | 18           | Artificial tanning machine (ultraviolet light)          | Not reported | Only the upper surface of the tongue | Change in swallowing (dysphagia and odynophagia)   |
| Rodrigues et al, 2010 <sup>15</sup>  | Cross-sectional study | To trace the speech-language profile of patients with head and neck burns.   | 10     | Female (4) e Male (6)    | 33 to 52     | Alcohol, flames and electricity                         | 2nd and 3rd  | More than 30 years                   | All had swallowing alterations, 9 showed impairment in speech articulation and 7 participants presented respiratory changes (respiratory effort) |
| Tilney, 2010 <sup>16</sup>           | Case study            | Case report of an 80 year-old man found in a rural area fire   | 1      | Male                     | 80           | Thermal   | 1st and 3rd  | 80                                   | Respiratory change (impossibility of upper respiratory breathing) and trismus  |
| Borges et al, 2011 <sup>12</sup>     | Case study            | To present a speech-language pathology approach in the case of a patient who suffered a 2nd and 3rd degree burn in the region of the face, thorax and upper limbs. | 1      | Male                     | 23           | Electricity   | 2nd and 3rd  | Not reported                         | The participant presented alteration of chewing, swallowing, articulation of speech and facial mimetic   |

| Article                            | Study type            | Objective  | Sample | Sex (n)                      | Age (years)         | Burn etiology                | Burn degree  | Body surface burned (%) | Functions of the stomatognathic system altered after face and/or neck burn   |
|------------------------------------|-----------------------|--|--------|------------------------------|---------------------|------------------------------|--------------|-------------------------|--|
| Rumbach et al, 2011 <sup>17</sup>  | Cohort study          | To verify the incidence of dysphagia in patients with thermal burns and determine the characteristics that can predict the risk of dysphagia in these patients | 438    | Female (90) e Male (348)     | 13 to 90            | Thermal                      | Not reported | 10.46 (SD=11.75)        | Changes in swallowing and breathing (49 patients presented dysphagia)  |
| Rumbach et al, 2012 <sup>18</sup>  | Cross-sectional study | To document the physiological characteristics of swallowing after thermal burn injury.   | 19     | Female (5) and Male (14).    | 18 to 85            | Flames and overheated liquid | Not reported | Mean 31.87 (SD=17.06)   | Alteration in chewing and oral swallowing (13 participants) and alteration in the pharyngeal phase of swallowing (12 participants presented laryngeal penetration or laryngotracheal aspiration, 6 of which were silent) |
| Belenkiy et al, 2014 <sup>19</sup> | Retrospective study   | To determine the prevalence of acute respiratory distress syndrome in soldiers with burns caused in Iraq and Afghanistan                                       | 876    | Female (7) and Male (284).   | Mean 26.3 (SD=7.2)  | Thermal                      | Not reported | Mean 33.7 (SD=23.7)     | Alteration in breathing (291 required mechanical ventilation 95 suffered from acute respiratory failure syndrome)  |
| Rumbach et al, 2014 <sup>20</sup>  | Cohort study          | To evaluate the validity and reliability of a predictor of risk for dysphagia in a hospital for patients with thermal burns                                    | 356    | Female (105) and Male (251). | 14 to 87            | Thermal                      | Not reported | Mean 7.67 (SD=10.95)    | Alteration in swallowing (30 patients presented dysphagia)   |
| Moiser et al, 2016 <sup>21</sup>   | Cross-sectional study | Identify the differences between pediatric patients with thermal burns who needed mechanical ventilation or not.   | 345    | Female (164), Male (181)     | Mean 3.34 (SD=3.75) | Thermal                      | Not reported | Mean 4.8 (SD=4.4)       | Respiratory change (6 participants required mechanical ventilation) in 66% of participants who suffered head and neck burns  |

Legend: SD = standard deviation

## Discussion

Burns affecting the face and neck are considered special, and their severity is attributed to the complexity of the structures present in this region. Accidents that result in burns usually require special attention because of the ease of complications such as: infections, scar retractions, and anatomic-functional impairment<sup>12</sup>. Traction forces, caused by scarring, can lead to insufficient neck extension, incomplete oral occlusion and buccomaxillofacial skeletal deformities<sup>11</sup>

The most impacted function, according to the present literature review, was swallowing. Burns affecting the facial and/or cervical region can lead to changes in all phases of swallowing due to changes in sensitivity, proprioception and structural mobility.

Of the eleven observational studies analyzed, more than half (six studies) reported impaired swallowing<sup>12,14,15,17,18,20</sup>. The restriction in the opening of the mouth presented as one of the most compromised in the process of swallowing. In one of the case studies presented<sup>12</sup>, the reduction in mouth opening due to hypertrophic scarring in the region of the labial commissures was responsible for the change in swallowing, especially in its oral preparatory phase. Another case study<sup>14</sup> portrayed the story of a patient who sought care due to dysphagia, and in the previous three days had noticed odynophagia and bilateral blisters on the upper surface of the tongue. After investigation, it was found that the young man had exposed the tongue out of the oral cavity for 30 seconds during a tanning session with ultraviolet light, believing that such light would be healing for an injury he had acquired days before, due to an accidental tongue bite. Fortunately, after eight days of medical treatment, the blisters and pain disappeared and the young man returned to normal eating.

The 10 participants of a cross-sectional study presented changes in the swallowing function, after clinical evaluation with saliva and solid food. The authors attributed this fact to the limitation of the mandibular, cervical and facial movements observed at the moment of hospital discharge, after two months of hospitalization for head and neck burn<sup>15</sup>. Evaluating a larger number of subjects (438), another study<sup>17</sup> observed dysphagia in 11% of its sample, after clinical evaluation of swallowing with soft, pasty, thickened liquids and fine

liquids. Of these, 40.8% were classified as having severe dysphagia, 30.6% with moderate dysphagia and 28.5% with mild dysphagia. After comparing the group of dysphagics with the non-dysphagic group (389 participants), the authors observed that the need for intensive care unit admission, mechanical ventilation, presence of inhaled lesion, burned body surface area equal to or greater than 18%, burns in the head and neck and the need for debridement, were risk factors for swallowing changes.

Subsequently, another study was conducted to validate such risk factors for dysphagia<sup>20</sup>. The authors observed that 24.9% of 356 participants had dysphagia and were evaluated using the same methodology of the previous study. The authors concluded that the application of risk factors described above should always be performed in conjunction with speech-language pathologist-assisted swallowing or swallowing assessment procedures to minimize the risk of aspiration and maximize oral intake, thereby increasing recovery potential.

One of the studies<sup>18</sup> was dedicated to evaluate in detail the function of swallowing in burn patients, using clinical and nasoendoscopic evaluation. The authors observed that in the preparatory phase, the participants presented oromotor weakness, increase in the preparation time of the bolus and muscular fatigue. In the oral and pharyngeal phase, there were alterations in the ejection of the alimentary bolus to the pharynx, decrease in intraoral pressure, alterations in the velopharyngeal closure and reduction of the pharyngeal peristalsis, and alimentary residue in the oral cavity and pharyngeal region after swallowing. In the esophageal phase, the authors verified the compromise by stenosis or resection of the esophagus. In addition, decreased intra- and extraoral sensitivity was evidenced, leading to an inability to control secretions and food residues.

Another changed stomatognathic function in great number of the burned patients, according to the analyzed literature, was respiration. One of the most serious complications that an injured individual may present is airway injury, which can be progressive, leading to bronchospasm, acute respiratory failure and, consequently, vital organ disorders, with special attention for the presence of dyspnea, as well as nasal obstruction<sup>2</sup>. Five of the 11 studies described some type of respiratory compromise in their participants<sup>15-17,19,21</sup>.

Oxygen therapy was required in all participants of one of the studies<sup>15</sup> in which 70% of the



subjects presented ventilatory effort. In one of the case studies<sup>16</sup>, the burn caused significant nasal, oropharyngeal and glottic edema, with consequent need for orotracheal intubation, after having been found unconscious in a field fire (rural area).

Of the 438 participants in a longitudinal study<sup>17</sup>, 12.3% required intubation and mechanical ventilation due to respiratory distress. Of these, only 6.9% had suffered an inhalation injury, which reflects respiratory impairment also caused by burns on the face, which often obstruct the passage of air through the upper airways.

In a retrospective study<sup>19</sup> of 876 US soldiers who were burned during combat in Iraq and Afghanistan, 33.2% required mechanical ventilation and acute respiratory distress syndrome was the cause of 16.5% of the soldiers' deaths. Such a syndrome developed more in individuals who had suffered from intracranial injury, pneumonia, and blood transfusion. In addition, age and extent of burned body surface were also predictors of mortality.

In one of the few studies found with pediatric patients<sup>21</sup>, it was observed that of the 345 participants, 6 (1.7%) presented respiratory alteration that led to the need for mechanical ventilation. It was noted that of the 66% of those children who had suffered head and neck burns, they were younger (mean age 8 months) and had a higher percentage of body surface area burned (mean 17.3%). Such children presented increased risk of mortality and longer hospitalization.

Only three and two of the studies analyzed described changes in speech functions<sup>10,12,15</sup> and chewing<sup>12,18</sup>, respectively. It is understood that the impact of head and neck burns on these functions is extremely relevant and significant; however, most of the selected studies were not intended to investigate such aspects. In addition, the fact that chewing was part of the preparatory oral phase of swallowing meant that it was not mentioned specifically in some of the studies analyzed<sup>14,15,17,20</sup>. The presence of trismus after burned body surface of 80%, in one of the case studies<sup>16</sup>, also makes it possible to infer a chewing alteration, but this fact was not described in the publication.

When evaluating 12 patients in the acute phase of burn treatment, researchers<sup>10</sup> observed a reduction in maximal phonation time in 11 participants, reduced speech articulation in 10, and pneumo-articulatory incoordination (characterized by

five subjects who used reserve air and four who performed refueling insufficient air). Described by the authors as a risk factor for future dysphonies was the reduction in the articulatory pattern of speech added to the changes in phonation time and in the coordination between breathing, phonation and articulation functions.

In a less acute phase, one study<sup>12</sup> reported the case of an adult after electric burn that presented reduction in the articulation of speech due to tissue retraction from labial commissures, which consequently led to a significant reduction in mouth opening.

Pre-hospital discharge, a reduction in the articulation of speech was observed in nine of the ten participants of a cross-sectional study<sup>15</sup>; the cause of this alteration was related by the authors to the acute immobility of the structures and the presence of tissue retraction already established in the face and neck.

The chewing function was greatly impacted, mainly, by the restriction in the opening of the mouth and reduction of mandibular movements resulting from hypercontraction. The retraction of the labial commissures with evolution to an important limitation in mouth opening was the cause of masticatory alteration in the case report<sup>12</sup> of a young patient with second and third degree burns.

In a cross-sectional study<sup>18</sup>, 14 of the 19 evaluated patients presented orofacial burns. Changes in chewing and swallowing were observed, on average, 16 days after hospitalization. All participants had reduced lip strength, 54% had dental flaws or teeth in poor state of conservation, and 54% also demonstrated a reduction in mandibular force, which led to slow chewing and preparation of solid food.

Regarding facial mimetics, two studies referred to this aspect<sup>12,13</sup>. After electrical burn, there was a reference to the alteration in the facial mimetic in the case of the young man with alteration also in the chewing, swallowing and articulation functions of the speech, due to the retraction of the labial commissures<sup>12</sup>.

In a study with five children after face burn, no significant changes were observed in facial mimetics; however, there was no movement in the affected muscles (procerus, upper lip lifter and large zygomatic) due to thermal burns<sup>13</sup>.

No study cited impairment of the suction function. This finding is probably due to the age group

of the study participants. Since all participants were older than two years, it is understood that sucking was practiced by a few or that this aspect was simply not investigated.

Among the selected studies, only two<sup>13,21</sup> described changes in the stomatognathic system due to burn in pediatric patients. However, the susceptibility of children to burn-related accidents is undeniable. Researchers<sup>13</sup> also point out that male children are the most affected, as they tend to be more exposed to risky activities than the female sex. Accidents with heated liquid, flames and electricity predominantly affect the child population, and may be caused by developmental characteristics such as physical and mental immaturity, lack of motor coordination, inexperience and inability to predict risk situations<sup>7</sup>.

In the present study, it was evident that the treatment of burns requires a great integration of health professionals, and the individual should receive multidisciplinary care aiming at more satisfactory results. The inefficiency of the functions of the stomatognathic system and the limitation of movements caused by the forces of tissue traction are some of the clinical findings that justify the performance of the speech, language pathologist and audiologist with these patients<sup>10,12,22-26</sup>.

## Conclusion

Changes in the stomatognathic system due to face and/or neck burns described in the literature over a 10-year period were mainly related to swallowing and breathing, especially due to immediate post-burn edema and mobility impairment caused by hypercatrization.

Alterations in chewing and speech functions, as well as impairment of facial mimetics were also found.

In the present study it was evident the scarcity of published works, both nationally and internationally, relating the effect of face and/or neck burns to stomatognathic functions.

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