



**LETTER TO THE EDITOR**

# Benign thyroid diseases: a public health problem aggravated in times of COVID-19 pandemic

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**Brazilian Society of Head and Neck Surgery (SBCCP).**

**Thyroid Department**

**Letter to Specialty Societies and Managers**

*"Economics is not about things and tangible material objects; it is about men, their meanings and actions."*

*Ludwig Heinrich Edler von Mises (1881-1973)*

**Preamble**

This article focuses solely on benign thyroid pathologies and the implications of their treatment in "Times of COVID-19 Pandemic", March 2021.

The text aims to inform as well as raise questions, the basis of a healthy scientific evolution, with subsequent application in favor of patients.

**Benign thyroid diseases**

Over 90% of the nodules detected in the thyroid are indolent benign lesions, and approximately 4-7% are carcinomas. The diagnosis of benign lesions is reached through clinical examination, and mostly by Ultrasound<sup>1,2</sup>. Nodules are highly prevalent, most of them are 1.0 cm in diameter at diagnosis, barely palpable, and with no glandular dysfunction. Recent studies have shown that these nodules present slow, progressive growth – limited to ~5 mm over 5 years in the main nodule in cases of multinodular disease, are mostly asymptomatic, require no treatment, and can be monitored<sup>1</sup>.

Signs indicative of compressive goiter in the air-digestive tract include the onset of symptoms of dysphagia, dyspnea on recumbency, sensation of a

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foreign body or pharyngeal globus, Pemberton's sign (late sign of intrathoracic goiter with vascular compression), multinodular goiter on palpation, of rapid growth, with esthetic deformity and risk of malignancy, associated or not with hyperthyroidism - these are the main indications for surgery.

The formal treatment of choice for medium to large-volume goiters is thyroidectomy, with total excision preferable to partial excision. This modality is considered safe when performed by experienced surgeons, and presents low complication rates<sup>3</sup>.

Regarding the health situation in Brazil, a technical study carried out by the National Confederation of Municipalities over a period of 10 years (2008-2018) showed that there was a loss of more than 40,000 hospital beds, with more closures (23,091 beds) than openings in the case of the Unified Health System (SUS) in the pre-pandemic period. The number of hospital beds is still smaller than the ideal and presents unequal distribution<sup>4</sup>.

Obviously, the decrease in the number of hospital beds over the years, wrecking of the health area, corruption in the health system, diversion of public funds, decrease in the population's income (with migration of 12 million patients to the SUS), among others factors, culminated in the crisis in the health sector, with suffocation of patient care, creating a bottleneck directed to hospitals, narrowing hospitalization and surgical center vacancies<sup>5-8</sup>. Further aggravating factors include the decrease in reimbursement by the SUS to hospitals of up to 77% for the costs of surgeries, which can support the decisions of managers to reduce hospitalizations, and the difference in the medical and hospital remuneration paid by the SUS when total thyroidectomy is performed to treat cancer or benign goiter - much higher in the oncological case<sup>9</sup>.

### The Times of the COVID-19 Pandemic

The World Health Organization (WHO) received the notification about the first cases of atypical pneumonia in Wuhan, China, on 31 December 2019. The disease was officially named Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) on 11 February 2020 and called COVID-19 pandemic on 11 March 2020 by the WHO. The virus can be spread by direct, indirect, or close contact through aerosol or micro-aerosol particles, salivary and respiratory secretions when talking, coughing, sneezing and singing, and patients who have had contact of the virus with the mucous membranes of the mouth, nose and eyes are also contaminated.

Data from the Johns Hopkins Coronavirus Resource Center of March 2021 show that the global incidence of SARS-CoV-2 was 124,477,094 people. In Brazil, this incidence was 12,130,019 people, with 298,676 deaths, resulting in an average mortality rate of 2.46%, ranging from 1.66% (Federal District) to 5.64% (Rio de Janeiro state)<sup>10</sup>.

The health and safety policies officially implemented in Brazil were social distancing, individual protection - personal protective equipment (PPE - masks, use of gel alcohol), and vaccination, which started in January 2022. There was also a redirection of surgeries: only oncological surgeries were indicated and where there was a risk (urgency/emergency) to life - they were all time-

sensitive, as shown by some recommendations<sup>11-13</sup>. The result observed in Head and Neck Surgery and Otorhinolaryngology clinical practice, combined with the immense intrinsic flaws of the Brazilian health system, is the postponement of the treatment of benign thyroid diseases of the goiter, whose waiting time was already very long previously (from 1 year and 6 months to up to 3 years), with lengthening of this period during the pandemic.

A study reported that, out of an estimated global number of 4,845,604 head and neck surgeries, 3,950,551 (81.5%) were canceled during the COVID-19 pandemic. In Brazil, 247,444 surgeries were canceled in a period of 12 weeks, with a great negative social impact, disease aggravation, and deterioration of patient individual physical and mental health status, which is yet to be verified in the daily practice of surgeons<sup>14</sup>.

In times of COVID-19 pandemic, the safety of patients and Head and Neck Surgery assistance teams must be paramount, and several guidelines have been published in this regard<sup>12,15,16</sup>.

The recommendations of the Brazilian Society of Head and Neck Surgery (SBCCP) regarding the safe resumption of surgical procedures served as a landmark of the specialty to guide the surgeon regarding the indication for surgery in times of the COVID-19 pandemic, such as the recommendation (Item 2) to postpone goiter and benign thyroid surgeries "except for cases of goiters with airway compression and evident respiratory symptoms and Graves' disease with contraindications to clinical treatment"<sup>11,17,18</sup>.

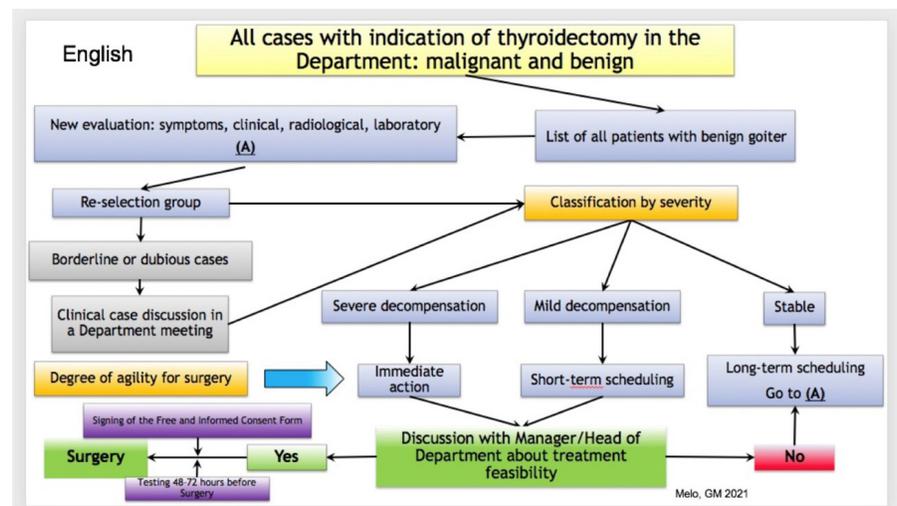
In this context, it is noteworthy the excellent step forward taken by the SBCCP in not mitigating the consequences of postponing benign thyroid surgeries, understanding the deleterious effects of this postponement, always weighing the risks and benefits in times of COVID-19 pandemic.

There are those who question, not without reason, that the slow growth of goiter and benign changes of the thyroid do not constitute an aggravating factor for the patient, and one can wait until times are safer. However, one cannot forget that a goiter with a "borderline" indication for surgery today, it will be so soon, either by size, clinical deterioration or compression, making the surgical procedure more exhausting, time-consuming, and with a greater risk of complications<sup>19</sup>.

### Suggestions

These suggestions can assist in guiding the surgical outcome of these cases of goiter and benign thyroid pathologies, although extensive coverage of the topic is not intended. The authors propose a flowchart to better manage these cases (Figure 1).

- Cases of patients with goiter and benign thyroid pathologies should be listed separately from thyroidectomies, differentiating them from carcinomas, thus providing a notion of the number of patients;
- Once selected, patients can be recalled and reassessed for symptoms, using imaging and laboratory tests, in an attempt to re-select those with worse symptoms or conditions for immediate treatment;



**Figure 1.** Flowchart proposed for conducting goiter/benign cases for surgery in times of the COVID-19 pandemic.

- In situations of doubt about the severity of the case in this new selection, a clinical meeting of the service team, similar to the Tumor Board for oncological cases, can assist in discussing the case;
- The cases are then classified according to their severity as Stable, Mild Decompensation and Severe Decompensation, thus establishing the degree of agility needed in the treatment process: Immediate Action, Under Brief Programming, and Under Subsequent Programming;
- Once the new list is obtained, these cases should be discussed together with the hospital or service manager/director regarding the feasibility to assess the current situation of hospital beds, staff and supplies needed for the surgery, as well as the current situation of the COVID-19 in the given hospital and municipality, aiming at patient and surgical team safety;
- Signing of Informed Consent Form;
- Testing of all patients 48-72 h prior to surgery;
- Hospitalization in a protected ward with a safety standard for COVID-19;
- Surgery with minimal aerosols and precaution for anesthesia and surgical staff.

## Conclusion

In conclusion, surgeries for goiter and benign thyroid pathologies in times of the COVID-19 pandemic can be performed as long as safety protocols are adopted for the patient and the surgical team, reducing the negative economic impact and, mainly, the impact on patient health.

The authors propose a flowchart to facilitate the management of these patients.

In parallel, the SBCCP initiated efforts to correct and remedy distortions in medical remuneration, especially in the public health system.

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