Preface

Recent developments in the follow-up, prevention and management of complications in thyroid surgery

Thyroid diseases, both benign and malignant, are the most common manifestation of endocrine disease and represents the most frequent endocrinopathy of surgical interest as well as the first cause of interventions on the neck.

Such frequency is largely related to the widespread iodine deficiency currently present today mainly in Europe, estimated to be approximately 2 billion people in the world, and responsible for overall about 200 million cases of goiter as well as for the high costs of its treatment .

On the other hand, in the world, due to various environmental stimuli including the same iodoprophylaxis, there is an increase in autoimmune thyroid disease and autoimmune hyperthyroidism, which are also responsible for a significant share of thyroidectomy cases.

Over the last two decades, there is also an exponential increase in cases of thyroid cancer, especially small papillary tumors which is highly debated by the scientific community that influences its clinical management, as it can be deduced from the new ATA 2015 guidelines (1).

If such increase of thyroid cancer is certainly due to the development of increasingly sensitive diagnostic techniques, which may also lead to the risk of overtreatment, it is also likely that part of this increase is real and determined by environmental factors (for instance iodine deficiency, ionizing radiations and the use of substances that act as endocrine disruptors widely used in industry and agriculture) (1-8).

Although the development of alternative techniques such as PNEI, radiofrequency and laser, which together with traditional radioiodine therapy may play a role in the treatment of thyroid disease, surgery remains the most important treatment for the therapy of benign and malignant thyroid disease and the improvement of surgical techniques and patient pre- and post-operative management is an important issue either for healthy and costs (1).

We are proud to present this special issue dedicated to the most recent development in the follow-up, prevention and management of complications due to thyroid surgery, which represents a comprehensive and extensive collection of information regarding all aspects of the patient's management including selection and preparation of the patient, informed consent, anesthesiological aspects, the progress in surgical techniques such as endoscopic thyroidectomy and technological tools used for the prevention of the most common complications (intraoperative PTH and neuromonitoring IONM), surgery extension in case of malignant cancer and the treatment of any complications including those that are rarely described in literature (1-6).

We are convinced that only a cooperative treatment, together with surgeons, endocrinologists, anesthesiologist can reduce and prevent treatment morbidities (1-12).

The relation between surgeon volume and outcomes has been examined for thyroid surgical procedures, with the general finding that increased volumes contribute to lower rates of complications. Again these results can only be obtained when there is a multidisciplinary approach to the thyroid patient (12).

Finally, technologies have been proposed and applied in thyroid surgery. Intraoperative neural monitoring (IONM) to prevent laryngeal nerve paralysis, early measurement of iPTH to avert symptomatic hypocalcemia, new devices for hemostasis and dissection to better control bleeding, furthermore genetic screening with improvement of survival rate. The impact of these technologies on the improved outcomes for thyroid surgery is remarkable (1-4). Likewise, endoscopic thyroid procedures gradually lead to a surgical progress that improves the perioperative quality of life : cervical minimally invasive mini-incision and video-assisted techniques ameliorated the postoperative course, and extracervical access achieved excellent cosmesis (2-6).

We remain therefore confident that this comprehensive and extensive special issue can stimulate and assist not only surgeons but also endocrinologists, oncologists and clinicians who deal with thyroid disease.

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