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DIAGNOSIS AND TREATMENT OF PATIENTS WITH VOCAL FOLD PARESIS AFTER STRUMECTOMY

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Abstract: Paresis of the recurrent laryngeal nerve is a common disease that is often encountered in otolaryngology. This type of vocal cord paresis is rather a symptom of disorders caused by pathology of the vocal apparatus of the larynx. It usually develops as a result of a pathological process affecting the vagus nerve or its upper or recurrent branches. Paresis means a temporary impairment of the mobility of the laryngeal muscles and this diagnosis is established for patients with a disease duration of up to 6 months.

Keywords: Disease, method, diagnosis, paresis, muscle.

INTRODUCTION

Restoration of mobility is possible within a period from several months to 2 years. The most common cause of paresis or paralysis of the vocal cords is surgery on the thyroid gland. This is due to the fact that the laryngeal nerve passes near the organ in the tissue. If it is damaged during surgery, the innervation of the muscle on the same side is disrupted.

The goal of our work is to improve the efficiency of rehabilitation of patients with impaired motor innervation of the larynx.

The following tasks were included within the framework of the stated goal of the study:

1. Evaluation of vocal and respiratory function disorders in unilateral and bilateral lesions of the recurrent nerves after strumectomy

2. Study of the results when applied to conservative and surgical methods of treatment with subsequent evaluation of the effectiveness.

MATERIALS AND METHODS

During the period from 2023 to 2024, we conducted a clinical examination and treatment of 45 patients with disorders of the motor innervation of the larynx, including 30 women and 15 men aged 35 to 62 years. Even experienced surgeons who operate on the most complex surgical pathology, diffuse toxic goiter (DTG) and thyroid cancer, are not guaranteed against damage to the laryngeal nerves. Of the 45 patients, 35 (78%) were operated on for DTG and 10 (12%) for nodular goiter. The patients were examined in the ENT department and the phoniatric office in the multidisciplinary TMA clinic and the Voice LOR clinic. Special methods for studying the clinical and functional state of the vocal apparatus and respiratory function included: laryngoscopy and microlaryngoscopy, fibrolaryngoscopy, transcutaneous ultrasound examination of the vocal folds, the function of external respiration and phonation, vital function of the lungs, phonation volume, and maximum phonation time.

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RESULTS AND DISCUSSION

The treatment efficiency was evaluated in two groups of patients. The first group of 30 patients consisted of patients with vocal cord paresis without severe respiratory disorders. Of these, paresis of the left vocal fold was noted in 18 people (60%), of the right - in 7 (23.3%), and on both sides - in 5 people (16.7%). These patients mainly required drug and phonopedic treatment. The second group included 15 (33.3%) patients with bilateral vocal fold paralysis, in whom symptoms of inspiratory dyspnea predominated, and the main goal of treatment was to increase the lumen of the larynx to compensate for respiratory function. In both groups of patients, the first stage of rehabilitation consisted of complex conservative treatment, which included anti-inflammatory, detoxification, microcirculatory and restorative therapy. The rehabilitation treatment complex included breathing exercises, phonopedic exercises, electrical stimulation of the laryngeal muscles, and acupuncture. As a result, in the patients of the first group, with treatment started within 1 month after the complication occurred, recovery was noted with quite satisfactory voice function in 25 (77.7%) people, and in 15 (21.4%) people with treatment from 1.5 to 4-5 months. In individuals with positive treatment results, an increase in the intensity of the voice, stabilization of the breathing rhythm, reduction of aspirated sounds, and an increase in the rhythm of maximum phonation from 4-6 to 25-30 s were noted.

In bilateral vocal cord paresis, 5 of 3 patients showed an increase in the lumen of the glottis from 2-3 to 5-8 mm with activation of vocal fold mobility and an increase in the time of maximum phonation to 20 s. In bilateral paralytic stenosis (the second group) of the larynx, the main task was to ensure adequate breathing. Indications for surgery in these cases were the ineffectiveness of conservative treatment in patients with a glottis width of less than 4 mm, as well as the impossibility of decanulation in previously tracheotomized patients. In the 5 patients with paralytic stenosis of the larynx that we observed, the following surgical interventions were performed: transthyroid lateralization of the vocal fold [2], staged laryngotracheoplasty in combined paralytic and cicatricial stenosis [1]. All patients were operated on under endotracheal anesthesia with the introduction of an intubation tube through a tracheostomy. The main stage of the operation consisted of submucosal removal of the vocal fold and vocal process of the arytenoid cartilage. In all cases, the lumen of the larynx was widened by an average of 4-5 mm, and respiratory coefficients were improved by 8-10%. Preservation of a sonorous voice was noted in 10 patients, and in 5 patients the vocal function was partially compensated due to pathological mechanisms of voice formation (false ligamentous and pharyngobucal).

CONCLUSION

1. Complex conservative treatment started in the early postoperative period in patients with reversible disorders of the motor innervation of the larynx ensures medical and social rehabilitation in 100% of cases.

2. Bilateral injury of the recurrent nerves with the development of paralytic stenosis with respiratory decompensation and the need for tracheostomy accounts for 15.8%.

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3. Planned surgical treatment of bilateral postoperative laryngeal paralysis should be performed if conservative therapy is ineffective 6-8 months after stabilization of morphological changes in the larynx.

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