



Features Of Damage To The Peripheral Nervous System In Primary Hypothyroidism

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ABSTRACT

The onset of polyneuropathy was dominated by the cause of thyroid hypofunction: in female patients with primary hypothyroidism, polyneuropathy was much more common and more pronounced than in male patients.

KEYWORDS

Primary hypothyroidism, polyneuropathy.

INTRODUCTION

Currently, diseases of the thyroid gland in terms of their prevalence rank first among endocrine pathology. Hypothyroidism is one of the most common diseases of the thyroid gland. Deficiency of thyroid hormones leads to inhibition of metabolism with the involvement of all organs and systems in the pathological process, including the nervous system with the development of various neurological disorders. These disorders belong to a group of potentially reversible disorders, which determines a positive prognosis for the results of their treatment. (1,2)

Damage to the neuromuscular system is one of the most common complications of

hypothyroidism and thyrotoxicosis. The neuromuscular syndromes of hypothyroidism include polyneuropathy, myopathy, tunnel neuropathies, pseudomyotonic and pseudomyasthenic syndromes, various types of polyneuropathy and myopathy are characteristic of thyrotoxicosis, in addition, thyrotoxicosis can be complicated by the development of thyrotoxic hypokalemic paralysis 3,4 and no provocation. about pathogenesis, correlation with hormonal status and the state of the neuromuscular system during the period of compensation of the underlying disease.

MATERIAL AND METHODS

78 patients with primary hypothyroidism aged 18 to 59 years, mean age 38.2 ± 7.6 years were examined. The patients were divided into 2 groups depending on gender. The first group I included 51 (65.4%) female patients, the II group - 27 (34.6%) male patients.

The severity of polyneuropathy was assessed using the supplemented scale for assessing the clinical severity of polyneuropathy by V.A. Bulanova. Clinical index of neuropathy (CIN) as the sum of scores of signs of polyneuropathy, CIN from 1 to 6.5 points corresponded to mild severity of polyneuropathy syndrome, from 7 to 14.5 points - moderate and from 15 to 20 points - severe.

RESEARCH RESULTS

The most common syndrome of damage to the peripheral nervous system in patients with primary hypothyroidism is polyneuropathy. It was found in the group of men in 77.8% (21 people) of the examined patients. Polyneuropathy was mild in 42.9% of cases (9 people), moderate in 57.1% (12 people); no pronounced polyneuropathy was found on the scale used. The average index of polyneuropathy in patients with primary hypothyroidism was 6.47 ± 2.54 points. The

clinical picture included complaints of patients about transient non-intensive and moderate intensity pain and paresthesia in the distal extremities, hypesthesia of the "socks and gloves" type. Impairment of deep sensitivity manifested itself in the form of difficulty in determining the direction of movement and counting fingers and toes. Movement disorders were represented by a decrease in tendon and periosteal reflexes, and only in 14.3% (3 people), a decrease in hand strength to 4 points. Severe paresis and paralysis, as well as muscle wasting was not observed. Vegetative disorders were also insignificant and manifested themselves mainly by dry skin of the hands and feet, mild acrohyperhidrosis and acrocyanosis. All of these symptoms were more pronounced in the upper limbs. It should be noted that there is no correlation between the severity of polyneuropathy and the age of patients.

In the group of female hypothyroidism patients, polyneuropathy was practically an obligate syndrome and occurred in 94.1% of cases (48 people). In addition, with hypofunction of the thyroid gland in women, polyneuropathy was more pronounced (CIN: 6.52 ± 2.70 points), in contrast to male patients (CIN: 3.66 ± 3.90 points), ($p < 0.001$). The data are presented in Figure 1.

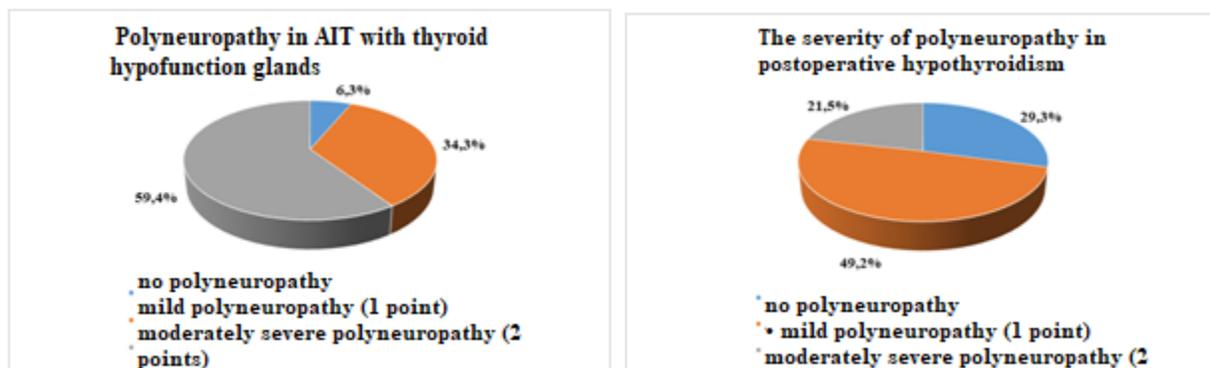


Figure 1. The incidence and severity of polyneuropathy depending on the causes of primary hypothyroidism

The nature of polyneuropathy did not depend on the severity of thyroid dysfunction. In patients with subclinical hypothyroidism, polyneuropathy was detected in 94.8% of cases, in patients with clinical hypothyroidism - in 93.8% of cases. The average CIN in women with subclinical hypothyroidism was 6.60 ± 2.60 points, and in patients with clinical hypothyroidism the average CIN was 6.19 ± 2.95 .

CONCLUSION

Thus, the peculiarity of the clinical picture of polyneuropathy in male patients with primary hypothyroidism was its predominantly sensitive nature, mild and moderate manifestations, more pronounced in the hands. The occurrence of this syndrome was dominated by the cause of thyroid hypofunction: in female patients with primary hypothyroidism, polyneuropathy was much more frequent and more pronounced. In patients with varying degrees of severity of hypothyroidism, the incidence and severity of polyneuropathy were almost the same.

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