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ULTRASOUND NAVIGATION OF LOCAL CORTICOSTEROID ADMINISTRATION IN PERONEAL TUNNEL SYNDROME OF COMMON FIBULAR NERVE.

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Objectives: Evaluation of the possibilities of ultrasound imaging in the treatment of tunnel syndrome CFN.

Materials: Ultrasound examination in B-mode and Doppler mapping of 12 patients with tunnel syndrome CFN and local administration of a corticosteroid drug under continuous ultrasound control were performed.

Results: Ultrasound of the CFN revealed a zone of compression-ischemic changes, the signs of which were: deformation of the nerve trunk, an increase in the cross-sectional area of adjacent fragments, a decrease in echogenicity, loss of normal nerve architecture and the inability to differentiate into individual fascicules, a decrease in the echogenicity of the perineurium, increased vascularization. The criterion of differential diagnosis with polyneuropathy was the absence of the described changes on the remote segments of the nerve.

The locus of the detected changes was considered an aim for perineural corticosteroid administration. The administration and distribution of the drug were monitored echographically. If the distribution of the drug in the tissues did not correspond to the desired, the position of the injection needle was changed without removing it from the tissues.

Stable improvement was determined within 1-7 days after injection: reduction of pain syndrome, regression of clinical symptoms, improvement of foot mobility, improvement of conductivity during electrophysiology by 25-30%. No complications were observed.

Conclusions: The advantages of ultrasound imaging in the treatment of tunnel syndrome CFN consist in the precise determination of the localization of the nerve lesion site as a target for exposure, the possibility of controlling needle insertion and correcting the process of formation of the depot of the drug.

Keywords: common fibular nerve, ultrasound navigation, tunnel syndrome.

Changes in Thyroid Nodules Caused by COVID-19, According to Ultrasound.

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Objectives: The COVID-19 pandemic has posed a number of issues of medical and social significance to doctors of various specialties. In particular, the issue of the impact of COVID-19 on the course of chronic diseases and conditions is relevant and little studied.

The aim of the work is to study changes in the structure of thyroid nodules after COVID-19 according to ultrasound data.

Materials: Dynamic ultrasound examinations were performed in 39 patients with verified benign thyroid nodules and pseudonodular changes in autoimmune thyroiditis. The duration of follow-up before COVID-19 disease was 0.5-10 years, after the disease - 2-6 months.

Results: In 8 (42%) of 19 patients with autoimmune thyroiditis, an increase in pseudonodules in size and the fusion of several small pseudonodules into large ones were noted without significant changes in echographic characteristics. Enlargement and fusion of pseudonodules can be caused by the intensification of lymphoid infiltration due to the activation of autoimmune processes determined by the COVID-19.

In 11 (55%) of 20 patients with benign nodules, a change in their echostructure in the form of microcalcifications was noted, in 6 of them the nodule size increased. A possible cause of such changes may be the destruction of small blood vessels with pinpoint hemorrhages because of COVID-19, followed by their calcification. A fine-needle biopsy of the altered nodes was performed, in one case precancerous proliferation was detected.

Conclusions: Postponed COVID-19 causes multidirectional changes in benign thyroid nodules, determined by ultrasound. Further studies are needed to assess their nature and impact on the course of the disease.

Keywords: COVID-19, ultrasound, thyroid nodules.