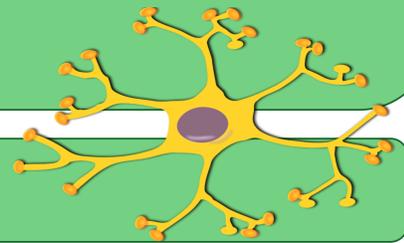
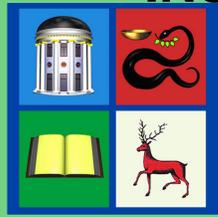


# CHARACTERISTIC FEATURES OF THE COURSE OF CHRONIC VENOUS INSUFFICIENCY OF THE LOWER LIMBS IN PATIENTS WITH IMPAIRED PERIPHERAL INNERVATION OF DIABETES MELLITUS TYPE 2

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## Background:

Several researches have shown that chronic venous insufficiency (CVI) and diabetes mellitus type 2 (T2DM) are often combined [1,2]. In addition, diabetes mellitus type 2 is associated with more severe CVI in 50% of the patients [3]. That's why it is necessary to study combined T2DM with CVI for better understanding the tactics of treatment that will slow down the progression of CVI and ultimately lead to the reduction of symptoms, prevention of severe forms of CVI with trophic ulcers, as well as improve the quality of life of patients, reducing the risk of loss of disability for these patients.

## Objective

To assess the influence of DPN on the course of CVI of the lower limbs in patients with combined pathology.

## Methods

40 patients with CVI of the lower limbs in combination with T2DM were examined.

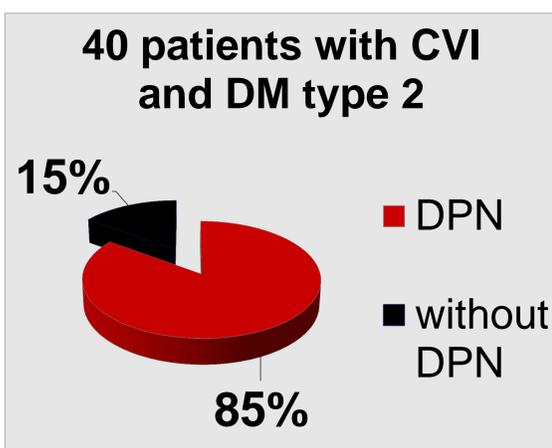


Fig.1. The contingent examined patients

DPN was diagnosed in 34 patients - group 1, 6 patients had no DPN - group 2. The diagnosis of CVI was established according to the international classification of CEAP. The intensity of subjective symptoms of CVI was assessed using Venous Clinical Severity Score (VCSS). Neurological examination included the use of the Neuropathy Disability score (NDS) and electroneuromyography (EMG).

## Results

The patients in group 2 varicose changes occurred more often ( $p=0.02$ ), in group 1 trophic changes prevailed ( $p = 0.01$ ):

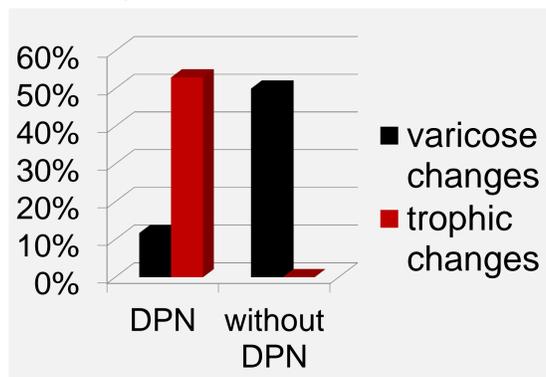


Fig.2. Leading clinical syndrome in the groups

A significant difference in VCSS was revealed: in group 1 –  $9.6 \pm 3.2$ , in group 2 –  $6.3 \pm 1.7$  points ( $p=0.01$ ). In patients with DPN a positive correlation between the NDS and severity of CVI ( $r=0.43$ ;  $p=0.01$ ) and between the NDS and VCSS ( $r=0.5$ ;  $p=0.002$ ) was determined. Analyzing individual subjective manifestations of CVI using VCSS, in group 1 there was a positive correlation between the NDS and hyperpigmentation ( $r=0.45$ ;  $p=0.007$ ), NDS and in duration ( $r=0.44$ ;  $p=0.008$ ).

According to the results of EMG in patients with DPN and trophic changes of the lower limbs:

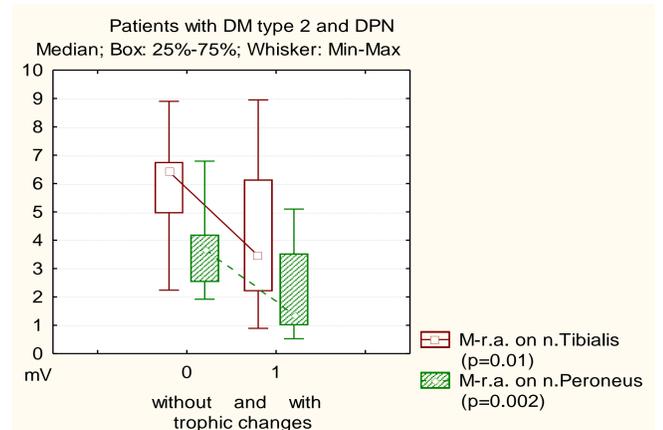


Fig.3. M-response amplitude on n. Tibialis and n. Peroneus in patients with and without trophic changes

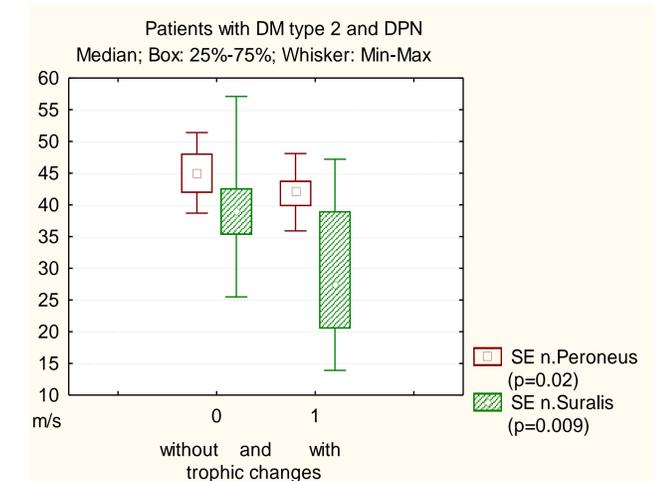


Fig.4. Spread of excitation (SE) in patients with and without trophic changes

## Conclusions

DPN aggravates CVI in patients with T2DM. The damage of the sensory and motor fibers according to EMG is associated with more serious trophic disorders caused by chronic venous insufficiency.

## References

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