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# Loss of sensation and symptoms of varicose veins related neuropathy: What does the evidence say?

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# Summary

**Background:** Evidence of peripheral neuropathy (PN) in patients with venous insufficiency (VI) has been reported. VI may provoke not only the onset of various symptoms but also a significant elevation of the threshold of sensation in the extremities.

**Aim:** To evaluate if peripheral critical sensation disorder determining anesthesia in legs is associated with VI, diabetes and age in ambulatory practice patients (APP).

**Methods:** 238 APP (176 male and 62 female;  $58,9 \pm 14,9$  years) were evaluated for sensation disorder by current perception test (CPT) with the Neurometer® on both legs toes at different frequencies: 2000, 250 and 5 Hz. At least in one measure having no response to the maximal stimulus at a CPT value of 9.99 mA indicated anesthesia. Patients were divided into two groups: those with anesthesia (WA) ( $n=23$ ; 9,7%) and without anesthesia (WoA) ( $n=215$ ; 90,3%). All patients anonymously filled the Varicose Veins Symptoms Questionnaire (VVSymQ®) (heaviness, achiness, swelling, throbbing and itching), also self-reported having ( $n=114$ ; 47,9 %) or no ( $n=124$ ; 52,1%) diabetes, having ( $n=75$ ; 31,5%) or no ( $n=163$ ; 68,5%) varicose veins (VV). Results were compared using Student t and Fisher Exact tests.

# Results

WA patients compared to WoA patients had:

- higher VVSymQ® results (7,48 vs 4,44;  $p=0,012$ ),
- felt more often heaviness (65,2% vs 42,8%;  $p=0,033$ ) and throbbing (52,2% vs 27,4%;  $p=0,016$ ) in legs.

There were no differences between self-reported patients with or without diabetes, also with or without VV.

WA patients were older (65,26 vs 58,24;  $p=0,032$ ).

# Conclusion

There is a discrepancy between the critical loss of peripheral sensation with self-reported diabetes or VV. Results that patients with anesthesia more often feel leg heaviness and throbbing symptoms may be important for clinicians on suspicion of critical sensation loss in APP. More studies are needed to better understand VI and diabetes related neuropathy.