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## Effect of compressive stockings with neuromuscular electrical stimulation in female patient with varicose veins: A case report

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### Abstract

**Background:** Varicose veins is a common chronic venous insufficiency disease. Varicose veins are characterized with tortuous, enlarged and palpable veins that affect lower limb. Venous valve incompetence and wall dilation are causative factors for developing varicose vein. Females aged 35-60 years are more prone to have varicose veins. Pregnancy, prolonged standing, family history and obesity are other common predisposing factors for varicose veins. Different physiotherapy treatments are used to treat varicose veins but as there is lack of literature on compressive stockings, exercises along with electrical stimulation, this case report aims to explore the effectiveness of compressive stockings, exercises along with electrical stimulation.

**Material & Methods:** A 45 years female patient with varicose veins received physiotherapy treatment, which included wearing compressive stockings, exercises and neuromuscular electrical stimulation sessions for 12 sessions on the calf muscle. Medium-pressure elastic compression stockings (Class II: 23–32mmHg) was used along with active range of motion exercises of ankle, standing gastrocnemius stretch with hands on the wall with 30 minutes walking daily. Two sets of 15 repetitions of each exercise, with the stretches held for 8 to 10 seconds were done by the patient at home. Electrical stimulation was given using a multi currents generator with frequency range between 30-50 Hertz, pulse width 150-200 microseconds, intensity according to the patient tolerance was given for 30 minutes on every alternate day for 4 weeks. Pre and post-intervention pain, functional capacity and quality of life were evaluated using Numeric Pain Rating Scale, 6 Minute Walk Test and Aberdeen varicose vein questionnaire respectively.

**Conclusion:** This case report shows reduction in pain score, improved functional capacity and overall improvement in quality of life of the patient suggesting effectiveness of compressive stockings, exercises along with electrical stimulation that helps to improve venous blood flow and calf muscle pumping action.

### Biography

Niti Prakash is working as an Assistant Professor at Mother Teresa Saket college of physiotherapy, Panchkula, India. In addition, she is a Ph.D. scholar at Maharishi Markandeshwar (Deemed to be University), Mullana, Haryana, India. She is experienced in teaching undergraduate and postgraduate students for the past 11 years and has supervised 12 postgraduate students. She has experience in both academics as well as clinical field and held diverse administrative positions including being officiating Principal for four years in the past. She is also serving as a member of executive committee of Haryana state council for physiotherapy.

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