Conclusion: Patients with varicose veins improved the most, whereas those with PTS improved the least. Performance seemed to depend more on disease pathophysiology than compression strength. However, the lack of responsiveness to compression strength may be related to the low external pressures used. Stocking performance tests may have value in selecting those patients who benefit most from compression.

Estrogen Receptors and Chronic Venous Disease

Serra R., Gallelli L., Perri P., De Francesco E.M., Rigiracciolo D.C., Mastroroberto P., Maggiolini M., de Franciscis S. Eur J Vasc Endovasc Surg 2016;52:114-8.

Objective/Background: Chronic venous disease (CVD) is a common and relevant problem affecting Western people. The role of estrogens and their receptors in the venous wall seems to support the major prevalence of CVD in women. The effects of the estrogens are mediated by three estrogen receptors (ERs): ERα, ERβ, and G protein-coupled ER (GPER). The expression of ERs in the vessel walls of varicose veins is evaluated.

Methods: In this prospective study, patients of both sexes, with CVD and varicose veins undergoing open venous surgery procedures, were enrolled in order to obtain vein samples. To obtain control samples of healthy veins, patients of both sexes without CVD undergoing coronary artery bypass grafting with autologous saphenous vein were recruited (control group). Samples were processed in order to evaluate gene expression.

Results: Forty patients with CVD (10 men [25%], 30 women [75%], mean age 54.3 years [median 52 years, range 33-74 years]) were enrolled. Five patients without CVD (three men, two women [aged 61-73 years]) were enrolled as the control group. A significant increase of tissue expression of ERα, ERβ and GPER in patients with CVD was recorded ($P < .01$), which was also related to the severity of venous disease.

Conclusion: ERs seem to play a role in CVD; in this study, the expression of ERs correlated with the severity of the disease, and their expression was correlated with the clinical stage.

Long-term Clinical Outcome and Functional Status After Arterial Reconstruction in Upper Extremity Injury

Frech A., Pellegrini L., Fraedrich G., Goebel G., Klocker J. Eur J Vasc Endovasc Surg 2016;52:119-23.

Objective/Background: To analyse long term outcome, including functional status and prognostic factors, in patients who have undergone arterial repair of civilian upper limb injury. Retrospective data analysis of prospectively collected data was performed.

Methods: This was a retrospective data analysis of prospectively collected data. Records of all patients who had undergone repair of traumatic arterial lesions in the upper limb between 1989 and 2010 were reviewed, and clinical follow up was performed. End points were: long term patency, measured by color Doppler ultrasound; vascular re-intervention; limb salvage rate; and long term functional status using the Disabilities of Arm, Shoulder, and Hand (DASH) questionnaire. The DASH questionnaire is an instrument used to identify a patient's disabilities, in which everyday activities are assessed by 30 questions. The DASH answers are summarized and, using a conversion formula, lead to a score between 0 (full recovery) and 100 (severe disability). The DASH questionnaire was sent to all German-speaking individuals for data supplementation after completion of a clinical follow up study.

Results: A total of 117 arterial repairs were performed in 108 patients (87 men, median age 35.7 years). Blunt trauma was the predominant cause of injury ($n = 96$; 82%). Accompanying nerve lesions ($n = 39$; 36%) and/or orthopedic injuries ($n = 65$; 60%) were present in 84 patients (78%). After a median follow up time of 5.3 years (range 0.5-19.7 years), 65 patients (60%) were re-investigated: long-term patency was 97%. The DASH questionnaire was answered by 57 patients (53%). Functional impairment was frequently seen, and determined by neurological injury (including neurological lesions, median DASH score was 40.3 [range 3.5-69.8] vs 0.8 [range 0-5.8] without; $P < .001$) and ischemia at time of injury (median DASH score with ischemia 4.2 [range 0-16.9] vs 0.0 [0-1.7] without; $P < .04$).

Conclusion: Favorable long term patency rates after arterial repair in upper extremity injuries can be achieved. Long term functional impairment is a significant problem and determined by associated neurological injury, as well as ischemia at time of injury.