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Pegado de Abreu Freitas, Rodrigo; de Souza Oliveira, Georges Willeneuve; Albuquerque  
Barbosa Cabral Micussi, Maria Thereza

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## Vascular physiotherapy: a strategy for treatment of chronic venous disease

### *Fisioterapia vascular: estratégia no tratamento da doença venosa crônica*

Rodrigo Pegado de Abreu Freitas<sup>1</sup>, Georges Willeneuve de Souza Oliveira<sup>2</sup>,  
Maria Thereza Albuquerque Barbosa Cabral Micussi<sup>1</sup>

We read with great interest the recent manuscript by Leal et al.<sup>1</sup> entitled “Vascular physiotherapy in treatment of chronic venous disease”. The authors investigate the results of a supervised rehabilitation protocol including warm-up, training and relaxation. The training protocol consisted of vascular kinesiotherapy using manual lymph drainage and resistance and aerobic exercises. The importance of this type of study is unquestionable since chronic venous disease (CVD) affects a considerable proportion of the worldwide population and can involve chronic wounds and disability.<sup>2</sup> This is an initial treatment for CVD and its aim is to reduce symptoms and help prevent the development of secondary complications and disease progression.<sup>3</sup>

However, another preliminary therapeutic option for all CEAP clinical classes of CVD is continuous compression therapy.<sup>3</sup> In this case, the objective is to administer graded external compression to the leg, opposing the hydrostatic forces of venous hypertension.<sup>3</sup> A number of compression garments are available including elastic compression stockings, multilayer elastic wraps, dressings, elastic and nonelastic bandages and nonelastic garments.<sup>3</sup> The American College of Phlebology strongly recommends compression therapy as an effective method for the management of symptoms related to CVD.<sup>4</sup> These recommendations apply to most patients in most circumstances without reservations.<sup>3,4</sup> It is clear that the results of the treatment protocol applied by Leal et al.<sup>1</sup> were good, but they could have been enhanced by addition of elastic compression stockings or nonelastic bandages worn during the exercise protocol and afterwards.<sup>5</sup> Treatment with 30 to 40 mm Hg compression stockings results in significant improvement in pain, swelling, skin pigmentation, activity, and well-being if compliance of 70% to 80% is achieved.<sup>5</sup> Compression stockings

have been shown to reduce the residual volume fraction, which is an indicator of improved calf muscle pump function, and they also reduce reflux in vein segments.<sup>5</sup>

Another important question is standardization of exercises prescribed for CVD. Structured exercise improves calf muscle pump function in chronic venous insufficiency and the efficacy of physical conditioning has been convincingly demonstrated in patients with chronic venous disease, but none of the practice guidelines for treatment of chronic venous disease describe the aerobic or strength training used in detail.<sup>5-7</sup> Perhaps this is the reason Leal et al.<sup>1</sup> did not provide details of the aerobic and resistance exercises prescribed. If the objective of physical treatment is to improve calf muscle pump function, we suggest following the American College of Sports Medicine’s guidelines for exercise prescription.<sup>7</sup> These recommendations may also be applied to adults with certain chronic diseases or disabilities, when appropriately evaluated and advised by a health professional.

In conclusion, the vascular physiotherapy protocol for treatment of chronic venous disease conducted by Leal et al.<sup>1</sup> achieved important results and could be enhanced with compression garments. The protocol with resistance and aerobic exercises could have been explained in greater detail in order that it could be reproduced by other health professionals.

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<sup>1</sup>Universidade Federal do Rio Grande do Norte – UFRN, Natal, RN, Brazil.

<sup>2</sup>Universidade Potiguar – UnP, Mossoró, RN, Brazil.

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#### Correspondence

Rodrigo Pegado de Abreu Freitas  
Universidade Federal do Rio Grande do Norte – UFRN, Faculdade de Ciências da Saúde do Trairí  
Rua Trairí, s/n – Centro  
CEP 59200-000 – Natal (RN), Brazil  
Tel.: +55 (84) 99915-0043  
E-mail: rodrigopegado@gmail.com

#### Author information

RPAF – PhD; Physiotherapist; Professor of Cardiovascular Rehabilitation, Universidade Federal do Rio Grande do Norte (UFRN).  
GWSO – MSc; Physiotherapist; Professor of Cardiovascular Rehabilitation, Universidade Potiguar.  
MTABCM – PhD; Physiotherapist; Professor of Women's Health, Universidade Federal do Rio Grande do Norte (UFRN).