

## INVITED COMMENTARY

# Doctor, the Stockings You Prescribed Are Too Tight and I Cannot Put Them On!

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Graduated elastic compression stockings are commonly used to treat chronic venous disease (CVD),<sup>1</sup> particularly in patients who are not willing to undergo invasive treatment. Traditionally, compression is graduated in order to prevent a tourniquet effect, although progressive gradient compression stockings applying a higher compression over the calf area may be more effective in improving muscle pump function.<sup>2</sup>

In this issue, Buset *et al.*<sup>3</sup> embarked on the same principal behind progressive gradient compression stockings. In an open label crossover randomised controlled trial (RCT) in CVD CEAP clinical class C3–C6 patients, the authors compared an investigational stocking, which exerts no compression in the foot and heel area, to a standard stocking of the same compression class. Unaided donning success was 100% and 75% for the investigational and standard stocking, respectively ( $p < .001$ ). Similarly, unaided removal (doffing) success was 100% and 66%, respectively ( $p < .001$ ). There was no significant difference in leg volume reduction after a day of wearing the stockings.

In order to place this RCT into perspective, it is important to acknowledge that, unlike parallel group RCTs that randomise patients to different treatments, open label crossover RCTs randomise patients to a sequence of interventions.<sup>4</sup> Therefore, with crossover RCTs there is a possibility of a carryover effect, which is a source of bias, because the same individual receives both interventions when comparing the two treatments.<sup>4</sup> To overcome this problem, it has been recommended that crossover trials should include an adequate “washout” period between the

end of the first intervention and the start of the second intervention, to prevent any effects from the first intervention being “carried over” to the measurement of outcome in the second intervention period.<sup>4</sup> It seems that in the current study there was no such washout period, which may have introduced some bias. Furthermore, this study has only provided a snapshot of use of the two stocking types; longer RCTs may be worthwhile, not only to assess the outcomes used in this study, but also to assess relative efficacy using modern patient reported outcome measures<sup>5</sup> in a broader cohort that includes CVD CEAP clinical class 2 patients.

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