

EDITORIAL**PUMPS AND LYMPHEDEMA**

In this issue of the Journal, there appears a retrospective study on the efficacy of Lymphapress usage for the treatment of peripheral lymphedema in children. At first blush, the number of children (namely 16) who were managed using this pneumatic device was few, and one might wonder in a retrospective analysis whether anything of value can be gleaned from such a limited investigation. Indeed, the sheer volume of statistics and figures seems excessive and the conclusions drawn probably debatable. Nonetheless, the Editorial Board was impressed with a side issue that seemed more important than the alleged marginal benefit using this compression device.

Key criticisms of the paper are self-evident in that the authors acknowledge that clinical "impressions" are extremely important and that they noticed a "maintenance/improvement" trend. They recognize how difficult it can be to measure and document limb volume changes in growing children and, accordingly, they offer two "accepted" methods of assessment and a third which they propose and used but which has no documented validity, namely, the thigh-to-foot limb volume ratio. This assertion is especially true considering the small number of patients involved. Moreover, in reviewing the data on pump use, it is clear that there was considerable variation in the protocol (varying from 2-7 days per week) and duration (1-8 hours a day). Indeed, the authors recognize that all the patients wore compression garments and were instructed in exercise techniques. It even seems plausible

that the so-called "maintenance" outcomes were due entirely to the wearing of a compression garment. Because most of the patients (73%) fell into the maintenance outcomes, one wonders if the pneumatic pump was having any beneficial effect. Furthermore, the pump techniques initially used were outdated (very high pressures), and in the Discussion the authors acknowledge that they now use the pump at a much lower pressure.

It is, therefore, reasonable to ask why the Editors have chosen to publish the paper. The answer can be summarized simply, that is, the Lymphapress device, if not effective, was clearly not harmful. A great deal of propaganda has been promulgated about the dangers of the Lymphapress pump and other similar pneumatic devices. Overwhelming benefits and advantages of complex physical therapy have been claimed, and an aura of fear and apprehension has evolved surrounding these dogmatic warnings to avoid compression devices. Admittedly, many of these pneumatic compression pumps can be quite expensive (cost range \$4,000-\$15,000 US) and in light of their dubious benefit, one should probably be circumspect, if not skeptical, about advising their purchase and usage. On the other hand, it is also apparent that the devices have been used for a long time, that serious documented complications of their appropriate use are infrequent, and even these are largely related to transient edema accumulation in the genital region after application to the lower extremities. Careful analysis of this paper suggests that

pneumatic compression has limited, if any, value in treatment of lymphedema. On the other hand, one suspects that the complications and dangers often attributed to usage of "pumps" are exaggerated and overblown.

REFERENCES

1. Hassall, A, C Graveline, P Hilliard: A retrospective study of the effects of the Lymphapress pump on lymphedema in a pediatric population. *Lymphology* 34 (2001), 156.

Charles L. Witte, M.D.
Tucson, Arizona USA