

# Comparative evaluation of the clinical effectiveness of two elastic compression stockings for the treatment of lower limb edema

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## Objectives

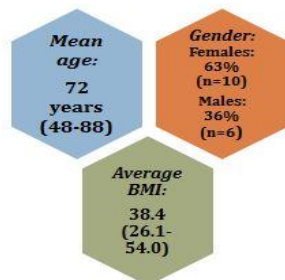
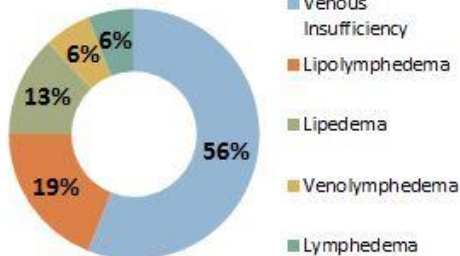
To compare the clinical effectiveness of two devices for edema reduction (measured by ↓ leg circumferences), pain (measured on a 0 to 10 scale) and patient preference.

## Study design

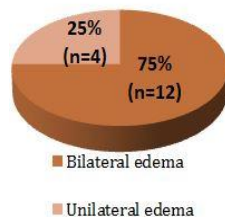
- 8-week observational study
- **Device A knitted nylon and medical spandex material that delivers compression via longitudinal fuzzy wales**
- **Device B an elasticated tubular bandage made of cotton knit interlaced with latex elastic threads to provide circumferential**
- Patients blindly randomized to either device; devices switched at follow up
- At final visit, patients chose device of preference and filled out short survey Patients served as their own controls

## Results

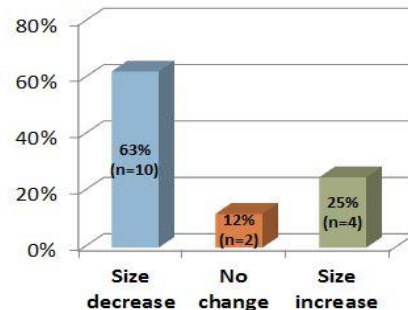
### Edema Diagnosis



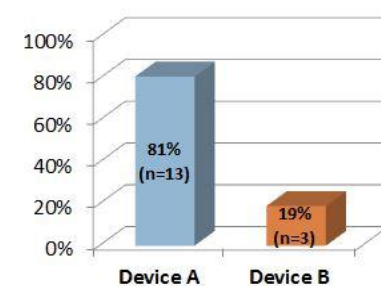
### Edema location



### Leg circumference with Device A



### Device preference



- In total n=16 patients were recruited
- Mean age 72 years, with average BMI of 38.4
- Predominantly females (63%)
- More patients had bilateral leg edema n=12 (75%) than unilateral leg edema n=4 (25%).
- While wearing the fuzzy wale elastic stocking (Device A):
  - n=10 (62.5%) had edema reduction
  - n=13 (81%) experienced no pain or reported a mean reduction in bandage associated pain
- Device A was preferred by n=13 (81%) of participants
- Device B was preferred by n=3 (19%) of participants; not a significant number for analysis of edema reduction
- Comments from the survey on the fuzzy wale stocking:
  - more breathable and comfortable
  - easy to put on and remove
  - cooling effect
  - relatively affordable

Longitudinal Compression Device A



Device A

Device B

Longitudinal

Circumferential



Device A

## Conclusion

The tubular longitudinal wale elastic stocking (Device A) is a comfortable, effective alternative to traditional circumferential elastic stocking for control of lower limb edema, especially for irregularly shaped legs, ease of application and making patients self-sufficient.

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