

Clinical Summary

Hands-up time to set up two different mechanical chest compression devices

Caruana E, Gauss T, Josseaume J, et al. *Annals of Emerg Med.* 2013;62(4s):p.S143. Abstract 397.

Objective:

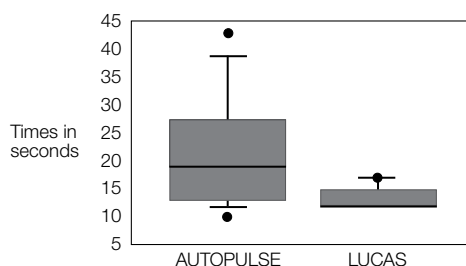
Compare the time necessary to set up and start two mechanical chest compression devices (LUCAS[®] 2 Chest Compression System from Physio-Control and the AutoPulse[®] from ZOLL)

Methods:

- Experimental manikin study (Laerdal ALS Skilltrainer)
- Users (EMTs) were trained and had real-life experience with both devices
- Sequence: manual CPR, cessation of CPR, application of test device, and startup of the device
- "Hands-off" time was measured from the cessation of manual compressions to the first mechanical compression
- Three EMTs performed the test sequence (for both devices) 4 times, for a total of 12 measurements
- Measurements were obtained independently (not by investigator)

Results:

- Hands-off (compression interruption time) was 19 (13-26) seconds for the application of the AutoPulse and 12 (12-14) seconds for the application of the LUCAS 2 device ($p=0.03$).
- Results are expressed as medians (IQR) and compared using a Mann-Whitney U test.



Conclusions:

- The setup and application of LUCAS 2 device takes less time than the AutoPulse device (statistically significant).
- This experimental study suggests that the use of the LUCAS 2 device is associated with fewer interruptions of compressions during CPR than the AutoPulse device.

Physio-Control Discussion Points:

- The results of this manikin study compliment the LINC Trial, a randomized control clinical trial, that provides the highest level of evidence that the LUCAS device can safely and effectively be routinely used to treat prehospital cardiac arrest patients.
- The participants in this study were asked to set up and start the devices as fast as they could. It is not known what techniques were used or if the procedural steps in the operating manuals were followed.
- Quick application time and ease of use on mechanical chest compression devices are critical factors in decreasing no flow or hands off time.

For further information, please contact Physio-Control at 800.442.1142 (U.S.), 800.895.5896 (Canada) or visit our website at www.physio-control.com.



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