

# **DOES THE USE OF LUCAS INFLUENCE SURVIVAL IN IN-HOSPITAL CARDIAC ARREST PATIENTS?**

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## Purpose of the study

This study evaluates retrospectively the outcome and hospital discharge after random allocation of the use of the LUCAS device in in-hospital MICU interventions for cardiac arrest on regular wards during a 26 month period (June 2005 – August 2007).

## Materials and Methods

All MICU-interventions for cardiac arrest where ROSC was not achieved within 4 minutes of conventional CPR, were allocated either to a LUCAS or a conventional CPR group. During the study period the MICU-team responded to 73 in-hospital calls for cardiac arrest. 52 patient records could be analysed. In 18 cases the LUCAS device was applied. In 34 cases conventional CPR was continued.

## Results

In 2 of the 21 excluded patients the application of LUCAS was technically not possible because of morbid obesity. All other patients were excluded because of ROSC within 4 minutes or insufficient data collection.

Within the 52 analysed records, both groups seemed comparable regarding demographic data and initial registered rhythm upon arrival of the MICU-team. ROSC was achieved in 55,56 % in the LUCAS group, a slightly better result compared to the conventional CPR-group (44,12 %). However no difference was demonstrated between both groups regarding discharge rate. All 8 discharged patients – 3 in the LUCAS group and 5 in the conventional CPR group - had a good neurological recovery.

## Conclusions

In our setting the use of the LUCAS device did not show any proportional difference in outcome or discharge rate for in-hospital cardiac arrest patients. However the device was appreciated as a useful pare of hands. No major complications were observed in the LUCAS-group.