

Chest-compression only cardiac resuscitation is superior to compression-ventilation technique

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Actual guidelines for resuscitation of cardiac arrest recommend a ratio between chest compression and ventilation of 30:2 in the case of resuscitation performed by a single lay by-stander. However, experimental studies suggested that chest-compression only resuscitation, without ventilation, can be superior to the combined technique of compression-ventilation. In theory, this was mainly due to the fact that important time was lost while switching from chest compression to ventilation, making both suboptimal. The SOS-KANTO observational study included 4068 patients who suffered a witnessed cardiac arrest. The prognosis at 30 days was evaluated in retrospect. Eleven percent of the patients were resuscitated by lay by-standers only by chest-compression, while 18% of the patients were resuscitated by

compression-ventilation technique. The rest of 71% of the patients were not resuscitated by lay by-standers. Patients who were resuscitated for witnessed cardiac arrest had a better survival at 30 days compared with patients who were not resuscitated (5% vs. 2.2%, $p < 0.0001$). Among resuscitated patients, chest-compression only lead to a better outcome compared to combined compression-ventilation technique. Thus, neurological survival at 30 days was 19.4% vs. 11.2% ($p = 0.041$) for shockable rhythms, 6.2% vs. 3.1% ($p = 0.02$) for patients with apnea and 10.1% vs. 5.1% ($p = 0.022$) for patients who were resuscitated in the first 4 minutes after cardiac arrest.

In conclusion, the optimal resuscitation technique for witnessed is chest-compression only, without ventilation. The guidelines for resuscitation need to be changed accordingly. □

Comment on the paper:

The SOS-KANTO study group. *Lancet* 2007; 369:920-926.