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**SUSTAINED ABDOMINAL AORTA COMPRESSION
ELEVATES CORONARY PERFUSION PRESSURE AFTER
ASPHYXIA CARDIAC ARREST IN A RABBIT MODEL**

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Objectives Our study is to investigate whether sustained abdominal aorta compression (SAAC) can improve coronary perfusion pressure (CPP) during cardiopulmonary resuscitation (CPR) and can improve resuscitation outcomes without causing liver laceration.

Methods Cardiac arrest was induced by asphyxia in 28 New Zealand rabbits and the cardiac arrest was maintained for 2 min before resuscitation. Animals were resuscitated either by the standard CPR (STD-CPR group) or the standard CPR and SAAC (SAAC-CPR group). Restoration of spontaneous circulation (ROSC), restoration of spontaneous breathing (ROSB) and cerebral performance category were determined. CPP, mean arterial pressure (MAP) and ROSC in the two groups were compared.

Results MAP and CPP in the SAAC-CPR group was significantly higher than that in the STD-CPR group throughout the process of basic life support. However, MAP and the blood gas results showed no significant difference between two groups during ROSC. ROSC was attained in seven of fourteen animals in the STD-CPR group and in 11 of 14 animals in the SAAC-CPR group. Five animals in the STD-CPR group and nine in the SAAC-CPR group survived 24 h after ROSC. No liver injury occurred in the two groups.

Conclusions SAAC-CPR could increase CPP and MAP during CPR. Furthermore, no liver injury was found with this resuscitation method.