ICU
MANAGEMENT & PRACTICE

Passive Leg Raising in Out-of-Hospital Cardiac Arrest

Survival among patients with out-of-hospital cardiac arrest (OHCA) is typically quite low. Survival in OHCA is dependent on several factors, including the performance of early bystander cardiopulmonary resuscitation (CPR), the use of public automatic external defibrillators (AEDs), and the performance of high-quality CPR or the post-resuscitation care provided in the hospital. High-quality CPR that optimises cardiac output is very important in this situation.

Early CPR guidelines recommend passive leg raising (PLR) as an important manoeuvre that can improve haemodynamics during CPR and promote venous return and increased artificial circulation. However, this recommendation was removed in 1992 due to a lack of sufficient evidence.

A clinical trial hypothesised that PLR performed at the beginning of OHCA treatment could be a safe manoeuvre and could improve survival at discharge with good neurological outcomes compared to patients who were treated in a standard way. The primary endpoint of the study was survival to hospital discharge with good neurological outcomes (defined as cerebral performance category - CPC 1-2). Adverse effects were also evaluated, and the presence of pulmonary complications on chest x-rays, brain oedema on CT in survivors and lung weight from autopsies in non-survivors were also recorded.

Five hundred eighty-eight patients were included in the study. Of these, 301 were treated with PLR and 287 were treated in a flat position. Findings of the study show that at hospital discharge, 3.3% of the patients in the PLR group and 3.5% of patients in the control group were alive with CPC 1-2. The researchers did not observe any significant differences in survival at hospital admission between the two groups. No difference was observed among patients with initial shockable rhythm either. With respect to adverse effects, no major differences were observed in pulmonary complications in chest x-rays and brain oedema on CT. Also, no differences in lung weight or brain weight were found among the autopsies from both groups.

Overall, these findings show that PLR during CPR did not improve survival to hospital discharge with CPC 1-2, nor were there any significant differences in adverse effects among study participants in either group.

Source: Critical Care

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