

Efficacy of Vasopressin Administration in the Resuscitation of Out-of-hospital Cardiopulmonary Arrest Patients

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IRYO Vol. 63 No. 6 (380-385) 2009

Abstract

BACKGROUND: The National Institute of Health (NIH) guidelines highly recommend using vasopressin as well as adrenaline for resuscitation. However, as health insurance does not cover resuscitation with vasopressin in Japan, it has not yet been introduced. As a part of a National Hospital Organizations' multi-center study, we conducted a follow-up study of out-of-hospital cardiopulmonary arrest (CPA) cases using vasopressin at 14 emergency and critical care centers.

METHODS: The CPA patients (patients from 18 to 79 years old) with witnesses were alternately assigned to receive injections of either a combination of vasopressin and adrenaline or adrenaline alone.

RESULTS: A total of 84 informed and consenting patients were examined over 2 years: 47 patients (M/F=29/18, age 69.7 ± 13.4) received 40 mg of vasopressin as soon as possible after the first dose of 1 mg adrenaline, followed by administration of 1 mg adrenaline if needed; 37 patients (M/F=21/16, age 68.4 ± 12.2) received only adrenaline 1 mg every 3 minutes. No significant differences were seen between the combination-therapy and adrenaline only groups in baseline characteristics. Among the combination-therapy group, 18 out of 47 patients (38.2%) showed return of spontaneous circulation (ROSC); however no one survived more than 1 month. In the meantime, 9 out of 37 patients in the adrenaline-only group (24.3%) showed ROSC, and 2 patients survived more than 1 month. As compared with adrenaline alone, the rates of ROSC and long term survival for the combination-therapy group showed no significance.

CONCLUSIONS: Resuscitation using vasopressin is less likely to effect significant changes in the improvement of CPA patients compared with adrenaline alone.

Key Words: cardiopulmonary arrest, vasopressin, resuscitation

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(平成20年10月27日受付, 平成21年5月8日受理)

和文タイトル: バソプレシンを併用した蘇生法による院外心肺停止患者の蘇生効果

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キーワード: 心肺停止, バソプレシン, 心肺蘇生