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Out of hospital cardiac arrest (OHCA) patients without return of spontaneous circulation (ROSC) – should they be transported with ongoing resuscitation to the hospital?

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Introduction

We have previously reported high ROSC rates and excellent survival in OHCA in our region [1,2]. Prehospital emergency physicians (anesthesiologists) take active part in most resuscitation. If ROSC is not achieved, resuscitation is terminated on the scene in most cases. We want to investigate factors linked to survival in the few patients transported with ongoing resuscitation to the hospital.

Methods

Our EMS system has a catchment area of around 300 000 inhabitants with one admitting hospital [2]. Using our Utstein template based quality assessment database for OHCA from the period from 1996 – 2005, we included OHCA of all causes, initial rhythm and ages, except patients with sudden infant death syndrome and with severe hypothermia.

Results

In the 10-year study period our EMS system responded to around 2050 alarm calls for OHCA. In around 1600 patients resuscitation was continued or started by the EMS, whereof 102 (6%) patients were admitted to the hospital with ongoing resuscitation. None of these patients survived to discharge.

There was no significant change in age distribution over the 10-years study period. (Pearson correlation Figure 1). The age of the patients varies from 1 to 90 years.

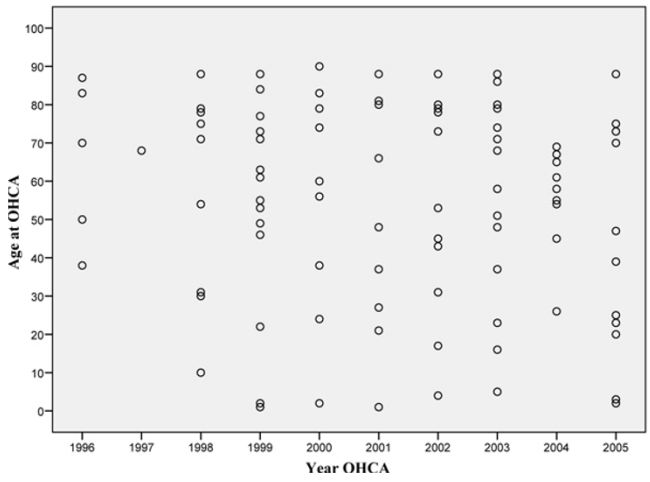

Figure 1
Age distribution – Patients with ongoing resuscitation.

Of the 102 patients 25 had ventricle fibrillation (VF) as first rhythm. The median number of DC shocks was 10. (Maximum 30 shock).

Conclusion

As none of the patients admitted to our hospital with ongoing resuscitation survived to discharge, we could not analyze factors linked to survival. Age did not seem to be a limiting factor when considering the continuation of resuscitation to the hospital.

In the patients with VF as initial rhythm, a large amount of futile shocks were given. A study evaluating the benefit of early transferal to emergency percutaneous coronary intervention (PCI) with ongoing resuscitation might be worth conducting.

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