

Abstract

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Characteristics of missing in-hospital cardiac arrest that occurred despite rapid response team activities : a retrospective cohort study to improve preventability

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Objectives:

In hospital cardiac arrest (IHCA) after rapid response team (RRT) contact is a rare event, however, it happens infrequently in the general ward. Thus the authors aimed to find out the incidence and prognosis of an IHCA after RRT contact and to review thoroughly these cases to find differences from IHCA without RRT contact. Also, by investigate IHCA cases, we tried to seek for correctable missing aspects of RRT activity and to improve quality of preventability.

Methods:

We conducted a retrospective cohort study at Ulsan university Hospital. Related data of IHCA situation were identified from pre-existing organized electronic database of RRT and record of IHCA and Code Blue activation. Records of 40 months were collected. To find correctable missing aspects and preventability, expert panel based on case review with analysis for each IHCA event were recruited.

Results:

A total of 179 IHCA events equating to 1.7 per 1000 total admission occurred during 40 month study period. Among them, 67 (37%) IHCA occurred after RRT contact. 47 (70%) cases of 67 IHCA events were in RRT working time. 35 cases were determined to be potentially avoidable. The 1-day mortality rate was 65% and 30-day mortality was 80%. Their modified early warning score (MEWS) were not higher than those of IHCA with RRT contact.

Conclusions:

IHCA with RRT content is not rare but results in poor prognosis. MEWS and RRT activation criteria are not fully predict deterioration of vital sign and prevent IHCA event. Specific and careful consideration are needed, in case of patients with older age and underlying malignancy.