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Letter to the Editor

Poor prognosis of female out-of-hospital cardiac arrest survivors: A risk assessment

Sir,

Nehme et al. evaluated sex difference of 12-month health outcomes in patients with out-of-hospital cardiac arrest (OHCA) survivors by telephone survey.[1] The authors recognized that 175 (7.6%) patients out of the 2300 patients discharged alive died during 12 months follow-up, and the rate of death in women was significantly higher than that in men, presenting 10.4% and 6.4%. Among the 2125 survivors, 1752 (82.5%) participated in the interviews, and adjusted odds ratios (ORs) (95% confidence intervals [CIs]) of females versus males for good functional recovery, living at home without care, the EuroQol-5D (EQ-5D) index score of 1 unit increase, the 12-Item Short Form (SF-12) mental component summary $\geq$50, and an SF-12 physical component summary $\geq$50 were 0.69 (0.53–0.88), 0.57 (0.43–0.76), 0.57 (0.43–0.75), 0.56 (0.40–0.78), 0.53 (0.39–0.71), respectively. I have some concerns about the study.

First, Bohm et al. also reported the risk of OHCA survivors with special reference to sex and age by 6-months follow-up.[2] Health-related quality of life (HRQoL) scores in females were significantly lower than those in males. Patients with age $\leq$65 years presented significantly better score in Physical Functioning, but presented significantly worse scores in Vitality and Mental Health. Combination effect of age and sex on survival should be verified by further study.

Second, Karlsson et al. investigate the association between gender and survival during stay in the hospital in patients with OHCA.[3] Adjusted OR (95% CI) of male gender for survival was 1.34 (1.01–1.78). They recognized that females were more often had hypokalemia, hypomagnesemia and bleeding requiring transfusion. As gender differences existed regarding cause of arrest and adverse events during stay in the hospital, I suppose that there would be difference in health condition between males and females at discharge, which would affect 12-month health outcomes.

Finally, Haywood et al. conducted a meta-analysis to assess HRQoL in OHCA survivors.[4] Although there is a limitation for measuring HRQoL, Health Utility Index version 3 (HUI3) and the Short-Form 36-item Health Survey (SF-36) were relatively reliable and valid methods for measuring HRQoL. In contrast, the Short-Form 12-item version (SF-12) and EQ-5D were not recommended as appropriate inventories. I understand that acceptable survey method would differ in different population, and Nehme et al. identified that poor prognosis of female survivors was verified by HRQoL indicators and mortality. As the survival curve was well separated between males and females in any following-period, fundamental biological mechanism would be existed in sex difference.

Conflict of interest

The author declares no conflict of interest.

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http://dx.doi.org/10.1016/j.resuscitation.2019.04.056