EDITORIAL

Cardiogenic Shock: Evolution According to Gender in Latin America

Shock cardiogénico: evolución conforme al sexo en América Latina

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Cardiogenic shock is still the most important cause of death in patients hospitalized with acute myocardial infarction. The randomized SHOCK (SHould we emergently revascularize Occluded Coronaries for cardiogenic shocK) trial set the basis for an early invasive management of these patients, (1) with subsequent increase in early revascularization strategies across the globe. This strategy has dramatically improved outcome and reduced in-hospital mortality of cardiogenic shock patients from the former 70-80% to nowadays 40-50%. (2)

Currently, only few large-scale landmark randomized controlled trials have been performed in the cardiogenic shock setting including the above-mentioned SHOCK trial in 1999, (1) the IABP-SHOCK II trial, (3-5) the CULPRIT-SHOCK trial, (6,7) the ECLS-SHOCK trial, (8) and the recent DanGer-Shock trial. (9) Accordingly, only few measures rely on strong clinical evidence in the treatment of cardiogenic shock. (10,11)

When insufficient evidence is available and mortality still high, evidence from observational data is important and additive to randomized data. This is particularly true for sex specific differences in cardiogenic shock because often women are underrepresented in the large-scale randomized controlled trials. This is partly an effect because women are older and many large-scale randomized controlled trials had an upper age limit for inclusion which automatically leads to less women for inclusion because of the higher age in women presenting with cardiogenic shock. Therefore, it is even more important in clinical practice to measure the outcome of acute coronary syndromes and the complications including cardiogenic shock with respect to sex specific differences. Only by measuring outcome, measures can be implemented to improve outcome for women and also men. As such, it can only be supported to see the publication of the LATIN Shock registry from Argentina, Bolivia, Chile, Ecuador, Honduras, Paraguay and Peru. (12) The in-hospital mortality of 49% in women and 54% in men shows the still very high mortality in cardiogenic shock in the current era of early revascularization. (13) Interestingly, despite the older age in women there was no difference in mortality, which has also been shown in other analyses such as the CULPRIT-SHOCK and IABP-SHOCK II sex specific subanalyses. (14,15) In contrast, other observational data suggest less invasive treatment in females presenting with cardiogenic shock with subsequent higher mortality. (16) Accordingly, the LATIN Shock registry supports no relevant outcome differences in cardiogenic shock based on sex.

Interestingly, still the majority of patients is treated by intraaortic balloon pumping where the evidence does not support to use this device. (3-5) On the other hand evidence for active mechanical circulatory support is also limited and currently only the DanGer-Shock trial and a meta-analysis of all trials comparing active mechanical circulatory support versus control supports the use in very selected patients with ST-elevation myocardial infarction and no risk of hypoxic brain injury. (9,17)

The authors should be congratulated to put this LATIN Shock registry together. More efforts should be directed towards cardiogenic shock registries and a higher number of patients will help to define the best treatment strategies to improve outcome in cardiogenic shock also with respect to sex specific differences.

Ethical considerations

Not applicable.

Conflicts of interest

None declared.

(See authors' conflict of interests forms on the web).

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