Category :**Cardiovascular: circulatory shock (general)**

A277 - *Noradrenaline dose variation related effects on mean arterial pressure: preliminary results from the novamap study*

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Introduction:

Responsiveness to norepinephrine dose variation in terms of mean arterial pressure (MAP) change is highly variable in acute circulatory failure. This preliminary study aimed to investigate the influencing factors of the pharmacodynamic effect of norepinephrine on MAP in critically ill patients.

Methods:

Monocentric, observational, prospective study conducted at the intensive care unit of Bicêtre Hospital, Paris. Patients with diagnosis of circulatory failure requiring norepinephrine and invasive pressure monitoring were included. To characterize MAP responsiveness, the maximal amplitude of MAP change over the amplitude of norepinephrine dose change (Emax/ΔNE) was defined.

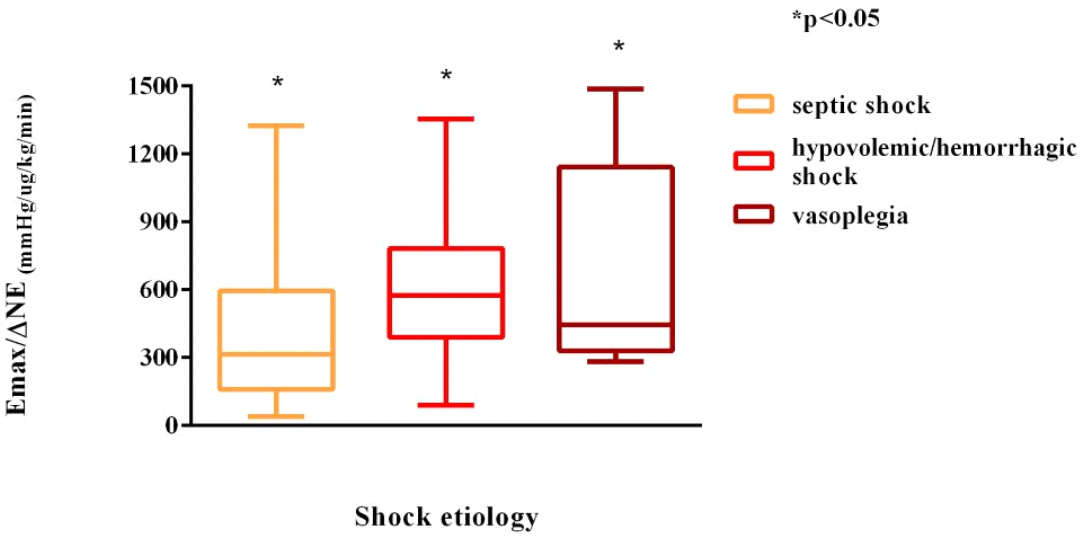
Results:

From January to July 2021, 29 patients presenting 86 episodes of norepinephrine dose change, 55 increases and 31 decreases, were included. The main origin of shock was sepsis in 59 episodes, followed by hypovolemic/hemorrhagic shock in 16 episodes and non-septic vasoplegia in 11 episodes. Septic shock was characterized by lower baseline values of mean (66, 58-86 vs 82, 71-103 mmHg, respectively) and diastolic arterial pressure (50, 44-64 vs 64, 55-78 mmHg, respectively) and a larger amplitude of norepinephrine dose change (0.08, 0.05-0.12 vs 0.04, 0.03-0.06 µg/kg/min, respectively). Emax/ΔNE was significantly lower in septic shock (315, 161-590 vs 575, 401-776 vs 446, 336-1119 mmHg/µg/kg/min, respectively, p=0.03, Figure 1). At multiple logistic regression analysis, preexisting hypertension, body temperature at the episode time and shock etiology were associated with Emax/ΔNE (p=0.002), and body temperature and C-reactive protein influenced Emax/ΔNE in septic shock episodes (p=0.003).

Conclusion:

Septic shock seems to be characterized by lower vascular reactivity compared to other shock etiologies and pressure responsiveness is not identical to other distributive shocks.

Image :



Emax indexed on norepinephrine dose variation (Emax/ΔNE), based on shock etiology.