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Editorial
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Angiotensin II for Vasodilatory Shock: Is it Ready for Prime Time?

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Editorial

More than 1.5 million people in the United States are diagnosed with sepsis every year, with approximately 250,000 people dying of sepsis [1]. The annual incidence of sepsis is on the rise [2]. Septic shock has even higher mortality rate, which is described as a state of decreased organ perfusion leading to irreversible end organ damage [3]. The distributive or vasodilatory shock is the most common type of shock which is characterized by the hypotension and peripheral vasodilation despite patient having an optimal cardiac output [4,5].

Beside intravenous fluid resuscitation, the vasopressors have been the therapeutic choice for the patients with vasodilatory shock. Catecholamines and vasopressin have been utilized as a vasopressor to help patients with vasodilatory shock. 48.2% of patients has some side effects during the vasopressor therapy [6]. The need for another medication existed in the management of the critically ill patient with the septic shock. When a normal person is challenged to combat the extremes of the situation, all catecholamine, vasopressin and Renin-Angiotensin-Aldosterone System (RAAS) comes into play to help the body combat the stressful insult. Recently, a new drug which is angiotensin II Giapreza) utilizing the RAAS has been approved for the treatment of vasodilatory shock [5]. It was a randomized double blind, placebo control trial of 344 patients showing effectiveness of angiotensin II in improving the blood pressure in the patient with vasodilatory shock [4]. 69.9% in the angiotensin II group in comparison to 23.4% in the placebo group achieved the improvement in the mean arterial pressure ≥ 75 mm hg or increase from baseline by ≥ 10 mm hg without increase in the other vasopressor therapy dose at three hours after the initiation of the infusion of the medication with p value of < 0.0001 [5]. The serious adverse effect was reported not to be different between the group. Though, the incidence of Deep Venous Thrombosis (DVT) was higher among the treatment group (13% in treatment vs. 5% in the placebo group as mentioned in their package insert) [7], some of this has been attributed to the way the Federal Drug Agency (FDA) has classified these adverse effect as DVT. Whereas, in the Athos trial reported incidence of DVT was 3(1.8%) in the angiotensin II group and 0 in the control group.

This new drug certainly adds to the armamentarium of the therapy for the treatment of the vasodilatory shock. It does shows significant response in improvement of the mean arterial blood pressure at three hours. It also helps in decreasing the use of other vasopressors. The biggest challenge would be the DVT risk profile. Is it real or is it the way the classification of the DVT been done by the FDA has to be dissected out? Till that time, the clarifications are not in or more data is available, the cost and the side effect profile may be a limiting factor on a new class of agent which has the potential to be beneficial for the patients with the vasodilatory shock.

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