

## New Strategies in the Treatment of Sepsis

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Despite there being several important forms of treatment involving the early goal directed therapy and bundle implementations, a search for new options in the treatment of sepsis have been made inevitable by today's persisting very high mortality rates. Some of these, such as antioxidant therapies and stem cell and gene therapies, are still in the experimental stages, while others, such as high-volume hemofiltration, use of high cut-off membranes, non-selective adsorption like coupled plasma filtration adsorption, selective adsorption of endotoxin with polymyxin-B column, are approaches supported by randomized, controlled studies [1,2]. Extracorporeal therapies used to be employed for renal replacement therapy, but can now be used for multiple organ support [2]. Additionally, they can also produce a direct immunomodulation effect by altering the level of inflammatory mediators in the blood, such as cytokines and chemokines, and performing modifications in the complements and coagulation systems [2]. In addition, inhale nitric oxide and immunoglobulin can be used as adjuvant therapies in these patients [3]. Used together with main forms of treatment of sepsis, such as antibiotics, these characteristics make it possible for successful outcomes to be achieved.

Herbal medicine has been used in treating infections and septic shock for a long time. Efficacy of these products for sepsis and septic shock has been partially proven by randomized controlled trials in humans and animals [4]. The active components of these products usually have one or more of the following properties: 1-direct attack and suppression on bacterial pathogens, 2-modulation of the host's immune system which resulting in suppression of inflammatory response,

3-neutralization of toxic free radicals, 4-lessen of blood glucose level [4]. Si-ni-tang and Baihu Decoction and Baihu with Radix Ginseng are popular ones of them [5,6].

In conclusion, we think that, means permitting, the use in cases of severe sepsis and septic shock of conventional together with adjuvant therapies, particularly extracorporeal procedures and herbal medicine will be beneficial in terms of patient prognosis, and are keenly awaiting the results of continuing research into new treatment modalities and of new studies on the horizon.

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