**Introduction:**

Many patients with sepsis receive Polymyxin B immobilized fiber column direct hemoperfusion (PMX-HP) as a rescue therapy. Recently, we are reported that PMX-HP reduces all-cause hospital mortality in patients with septic shock. (Nakamura Y et al. Crit Care 7;21(1):134, 2017). However, it is unclear that whether PMX-HP reduce not only septic shock patients but also sepsis patients. A purpose of this study is to clarify an effect of PMX-HP for the prognosis of patients with sepsis.

**Methods:**

Data from patients admitted for severe sepsis (including septic shock) to Japanese ICUs were retrospectively collected from Jan 2011 to Dec 2013 through the Japan Septic Disseminated Intravascular Coagulation (J-SEPTIC DIC) study data base set. We analyzed the potential benefit of PMX-DHP using a propensity score–matched (1:1) cohort analysis in patients with sepsis.

**Results:**

Of 2,952 eligible patients, 664 underwent PMX-HP. Propensity score matching created a matched cohort of 740 patients (370 pairs with and without PMX-HP). There was no significant difference between the two matched cohorts for the hospital and ICU mortality [Odds ratio (OR): 1.20, 95% confidence interval (CI), 0.93-1.52, p=0.150), OR; 0.98, 95%CI; 0.79-1.21, p=0.828, respectively].

**Conclusion:**

In this demonstrated that PMX-HP had a no benefit on hospital and ICU survival when compared with conventional management (non-PMX-HP) in matched patients with sepsis. From this study we concluded that PMX-HP has an effect for septic shock but has no effect on sepsis.

**References:**