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Introduction:
Colloid has been suggested to be used in septic shock after 30 ml/kg crystalloid resuscitation. Aim of this study was to compare 5% albumin (A gr) & 4% gelatin (G gr) as an early colloid resuscitation in septic shock patients admission to the general SICU in term of efficacy (shock reversal time; stop vasopressor) & safety [incidence of AKI (KDIGO criteria)] in the first 3 days of ICU admission.

Methods:
This prospective observational study was done in 125 consecutive septic shock patients, age>18 yrs admitting to the general SICU receiving 5% alb vs 4% gelatin 20 cc/Kg after initial 30 ml/Kg of crystalloid whom found to be fluid responsiveness. Patients undergoing cardiac, neurosurgical, traumatic, transplant, receiving FFP or other synthetic colloids were excluded. Demographic data, comorbidities, baseline Hb, Cr, albumin, type of surgery, site of infection, data in the first 3 ICU days (Hb, platelet, BUN, Cr, albumin, lactate & liver function, type & amount of fluid, blood/blood component, vasopressor, APACHE II & SOFA II score), ventilator & ICU days, 28 & 90 days mortality were recorded.

Results:
Patients in G gr (62) were significant (p<0.05) younger, higher net fluid balanced, higher Hb, lower alb level & higher SOFA II score & had significant longer shock reversal time [60 (42-99) vs 48 (30-84) hrs]. In the patients with admission serum albumin<2.5 mg/d; patient in the G gr had significant higher incidence of AKI [AKI-I: 66.7% vs 39.1%; AKI-II: 53.3% vs 26.1% & AKI-III: 43.3% vs 17.3%] & higher RRT rate (21.0% vs 15.9%). There’s no significant different in ICU stay, 28 or 90 days mortality.

Conclusion:
This study showed that 4% gelatin solution may not be safe to be used in surgical septic shock patient.