Introduction:
Previous trials have suggested a lower incidence of the need for renal replacement therapy (RRT) and acute kidney injury (AKI) in patients with shock treated with vasopressin or its analogues (VA) compared to other vasopressors [1, 2]. The aim of the present study was to systematically review the literature and synthesize evidence concerning the effects of VA compared to other vasopressors in distributive shock, focusing on renal outcomes.

Methods:
MEDLINE, Embase, Cochrane CENTRAL and Clinicaltrials.gov databases were searched through June, 2017 without language restrictions. Randomized clinical trials that compared VA with other vasopressors and reported renal outcomes in adult patients with distributive shock were included. Paired reviewers independently screened citations, conducted data extraction and assessed risk of bias. Odds ratio (OR) and weighted mean differences (WMD) with 95% confidence intervals (CI) were used to pool effect estimates from trials. Four prespecified subgroup analysis was conducted. Sensitivity analysis was applied to explore heterogeneity. The quality of evidence for intervention effects was summarized using GRADE methodology.

Results:
3,026 potentially relevant studies were identified and 30 papers were reviewed in full. Sixteen studies met the inclusion criteria, including a total of 2,054 individuals. Of these, 10 studies (1,840 individuals) were suitable for quantitative meta-analysis. Overall, the evidence was of low to moderate quality. Patients who received VA had a reduced need for RRT (OR 0.5 [0.33 - 0.75]; I² = 7%, P for heterogeneity = 0.37) and a lower AKI incidence (OR 0.58 [0.37 - 0.92]; I² = 63%, P for heterogeneity = 0.004).

Conclusion:
In patients with distributive shock, VA use is associated with a reduced need for RRT and lower AKI incidence, although these results are supported by low quality evidence.

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