



Key message

Among different corticosteroid regimens and different Intravenous immunoglobulin (IVIG) preparations, only anti-cytokines (very low certainty), and hydrocortisone plus fludrocortisone (moderate certainty) showed effectiveness for reducing short term mortality when compared with standard care. Data on long term mortality, hospital length of stay and ICU length of stay were limited.

Background

IVIG and corticosteroids are the most extensively studied immunomodulators for sepsis. However, the comparative effectiveness of different corticosteroid regimens, different IVIG preparations and standard care in the management of sepsis remains unclear.

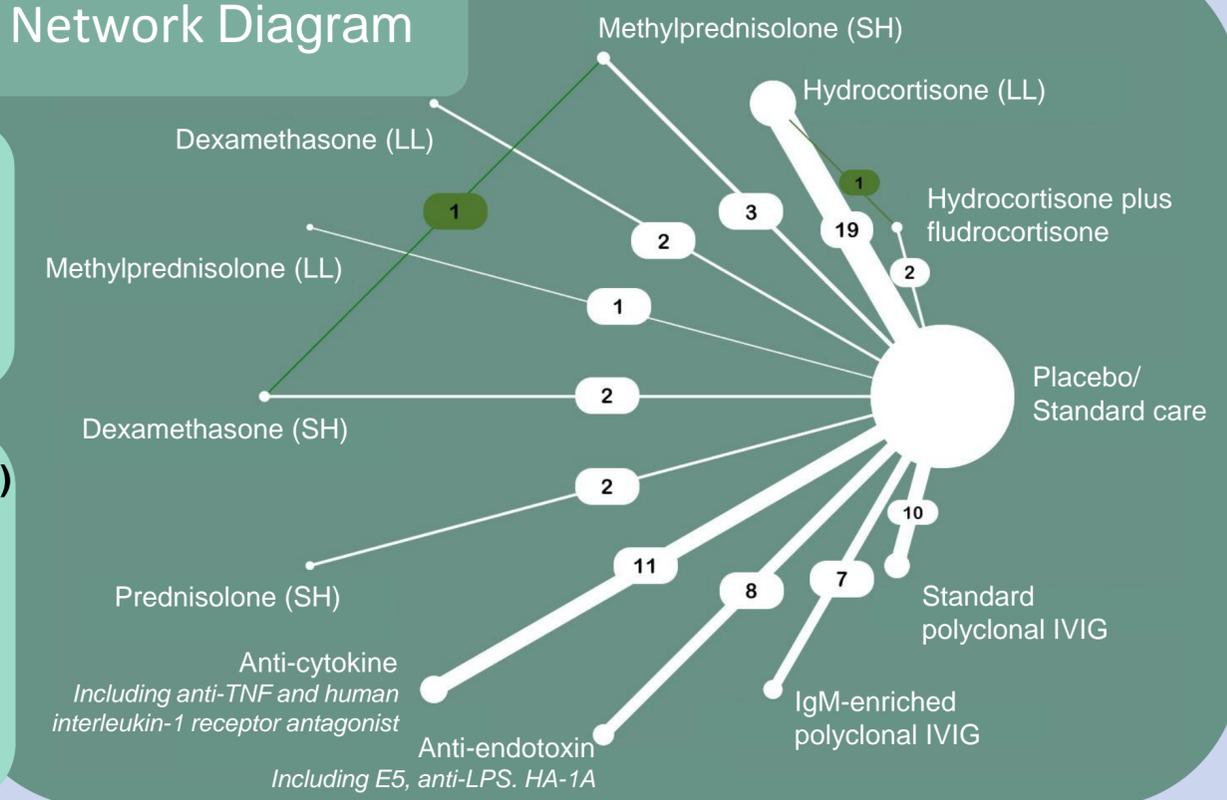
Data sources

67 RCTs

24,667 patients (>1 year of age) with sepsis, severe sepsis or septic shock

Comparison

Network Diagram



Nodes and edges are weighted according to the number of studies including the respective comparisons

Short course of high dose (SH)
>400mg hydrocortisone (or equivalent) daily for ≤3 days

Long course of low dose (LL)
≤400mg hydrocortisone (or equivalent) daily for >3 days

Results

Short term mortality (mortality up to 30 days)

Compared with **Placebo/Standard care**

Network meta-analysis, Odd ratio with 95% CrI

	0.1	1	7	
Hydrocortisone plus fludrocortisone		◆	0.79 (0.61, 1.00)	⊕⊕⊕⊕
Hydrocortisone (LL)		◆	0.97 (0.83, 1.10)	⊕⊕⊕⊕
Methylprednisolone (LL)	◆		0.41 (0.12, 1.30)	⊕⊕⊕⊕
Methylprednisolone (SH)		◆	1.30 (0.90, 1.90)	⊕⊕⊕⊕
Dexamethasone (LL)	◆		0.62 (0.26, 1.30)	⊕⊕⊕⊕
Dexamethasone (SH)		◆	1.40 (0.40, 6.50)	⊕⊕⊕⊕
Prednisolone (SH)	◆		0.82 (0.34, 1.80)	⊕⊕⊕⊕
Anti-cytokine		◆	0.87 (0.77, 0.99)	⊕⊕⊕⊕
Anti-endotoxin		◆	0.96 (0.80, 1.10)	⊕⊕⊕⊕
Standard polyclonal IVIG		◆	0.96 (0.67, 1.30)	⊕⊕⊕⊕
IgM-enriched polyclonal IVIG		◆	0.84 (0.54, 1.30)	⊕⊕⊕⊕

Consistency test: No statistical inconsistency

Sensitivity analysis: Analyzing only data on patients with septic shock, or on adults, or on studies with ICU settings, produced similar results

GRADE score
Moderate ⊕⊕⊕⊕
Low ⊕⊕⊕⊕
Very low ⊕⊕⊕⊕