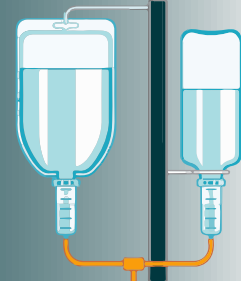


CRYSTALLOIDS & SURGERY OUTCOMES



RESEARCH QUESTION



In a surgical population undergoing general anesthesia, is use of unbalanced crystalloids (i.e., Normal Saline [NS]) associated with a higher rate of adverse outcomes compared to the use of a balanced crystalloid (BC) solution?

SIGNIFICANCE



- Use of crystalloid solutions is essential for provision of anaesthesia, resuscitation, and acute care to patients.
- The choice of which crystalloid fluid to use remains a matter of debate.

METHODS



- Retrospective study of adult patients (>16yrs) at a Canadian tertiary care center intubated for a vascular surgery procedure over 3-year period and receiving balanced or unbalanced crystalloid solutions pre- or intra-op.
- Outcomes evaluated included in-hospital mortality, extended ICU stay, and post-op need for ventilation, vasopressor therapy, or hemodialysis, as well as a composite endpoint of any of these adverse events occurring.

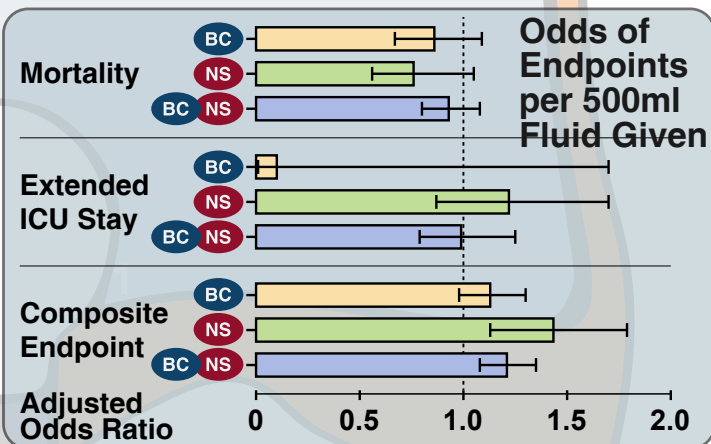
RESULTS



796 Total Patients { BC 425 / NS 158 / BC 213 / NS 213 }

OUTCOMES

BC	6% Mortality	0.2% Extended ICU Stay	11% Composite Endpoint
NS	12% Mortality	5% Extended ICU Stay	35% Composite Endpoint
BC	11% Mortality	3% Extended ICU Stay	42% Composite Endpoint
NS			



TAKE HOME MESSAGE



- The use of an unbalanced crystalloid solution was associated with poor outcomes in our study of vascular surgery patients.
- Further investigation to evaluate the importance of intraoperative IV fluid administration in the high-risk surgical population is warranted.