

Methylene Blue in the Assessment of Gain In Cardiac Surgical Post-Operative vasoplegia (MAGIC) trial

ACTRN12621000730808

Status	RECRUITING
Sponsor	Medical Research Institute of New Zealand
Enrollment	177 participants

Plain Language Summary

After cardiac surgery requiring heart-lung bypass, a small but serious number of patients develop a condition called vasoplegia — a sudden and severe drop in blood pressure caused by excessive widening of the blood vessels, driven by nitric oxide. This can be resistant to standard blood pressure-supporting medications. Methylene blue is a drug that blocks nitric oxide's effect on blood vessels and may reverse this dangerous drop in blood pressure. A small previous trial suggested it dramatically reduced mortality in these patients.

The MAGIC trial is testing this finding on a larger scale. Patients in the ICU after cardiac surgery who are on high doses of vasopressor medications and show signs of vasoplegia are randomly assigned to receive either a methylene blue infusion or a placebo. The main outcome is the number of hours patients are alive and free from blood pressure support.

You may be eligible if you are 18 or over, have recently undergone cardiac surgery with cardiopulmonary bypass, are currently on mechanical ventilation in the ICU, and require high doses of noradrenaline to maintain blood pressure, with evidence suggesting vasoplegia is the cause. People with an allergy to methylene blue, G6PD deficiency, or who normally take antidepressants (SSRIs) are not eligible.

Key Eligibility Criteria

Inclusion (11)

- Greater than or equal to 18 years of age
- Invasively mechanically ventilated in ICU within 24 hours of ICU
- admission and receiving greater than or equal to 10mcg/min of noradrenaline to support mean arterial pressure following cardiac surgery with
- cardiopulmonary bypass.

... and 6 more (see full listing online)

Exclusion (16)

- Death is deemed to be inevitable as a result of the current acute illness
- and either the treating clinician, the patient, or the substitute decision maker are not committed to full active treatment.
- The patient has mechanical cause of shock such as cardiac
- tamponade or tension pneumothorax.

... and 11 more (see full listing online)

Locations (4 total)

Austin Health - Austin Hospital - Heidelberg, WA,VIC, Australia

Fiona Stanley Hospital - Murdoch, WA,VIC, Australia

Sir Charles Gairdner Hospital - Nedlands, WA,VIC, Australia

... and 1 more locations

<https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?ACTRN=ACTRN12621000730808>

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