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Media release

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Fewer blood transfusions needed during surgery after patients given widely used drug, global study finds

Patients who are at risk of bleeding during their operation would need fewer blood transfusions according to the results of a new international study that highlights the benefits of tranexamic acid, a widely used drug, to reduce surgical bleeding and save lives.

Surgical bleeding accounts for 40 per cent of all blood transfusions, and more blood products are needed than are available worldwide.

The results of the Perioperative Ischemic Evaluation Study (POISE-3) of nearly 10,000 patients investigated whether tranexamic acid (TXA) reduced life-threatening and major bleeding in patients undergoing non-cardiac surgery – without increasing major clotting complications.

The Australian and New Zealand POISE-3 trial of 743 patients was funded by the National Health and Medical Research Council (NHMRC) to run at 20 hospitals across the Australian and New Zealand College of Anaesthetists (ANZCA) Clinical Trials Network (CTN) under the leadership of anaesthetists Professor Kate Leslie AO, Dr Thomas Painter and Dr Elizabeth Maxwell.

Dr Painter will present the findings at the 2022 ANZCA Annual Scientific Meeting on Tuesday 3 May. More than 1200 Australian, New Zealand and international anaesthetists and specialist pain medicine physicians have registered for the 29 April - 3 May virtual meeting.

TXA was given to patients at risk of bleeding or blood vessel complications. The study found that TXA did not increase blood clots, heart attack, stroke, or other major blood vessel complications in the 30 days after surgery.

In this trial, half of 9535 patients in 22 countries were randomly assigned TXA, half placebo. Patients were 45 years or older (average age 69 years) and 44 per cent of them were female.

The study has just been published in *The New England Journal of Medicine.*

“Bleeding is a common problem in patients undergoing non-cardiac surgery and it often results in patients requiring a blood transfusion. Our study demonstrates that tranexamic acid can prevent this problem,” said Dr Painter, senior staff specialist at the Royal Adelaide Hospital.

“Additionally, our finding of a safe, effective reduction in surgical bleeding has the potential to help healthcare systems on a broader, trickle-down effect.”

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“Surgical bleeding accounts for 40 per cent of all transfusions, and more blood products are needed than are available today around the world,” Dr Painter explained.

“Reduced bleeding that’s safe for patients could address the challenge of insufficient blood supply and save more lives.”

Dr Painter said the trial demonstrated that tranexamic acid reduced the risk of receiving one or two to four transfusions.

“Given that 300 million surgeries occur annually around the world, tranexamic acid has the potential for large public health and clinical benefits.”

The publication of the results in the *New England Journal of Medicine* adds to the ever-growing track record of the ANZCA CTN as a leading clinical trials network in the world to deliver world-class multicentre trials in pain, anaesthesia and perioperative medicine.

Link to *New England Journal of Medicine*: https://www.nejm.org/doi/full/10.1056/NEJMoa2201171

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