

WHAT IS TRANEXAMIC ACID?

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What is tranexamic acid?

Tranexamic acid (TxA) is an antifibrinolytic medication used to reduce excessive bleeding. When blood vessels are damaged during injury, platelets and fibrin collect at the site of the damage to form a clot, acting like a plug. However, other substances released during injury can also break down the clots. Antifibrinolytics work by preventing these substances from breaking down clots.

What's hot about TxA?

TxA is an 'old' medication that has been used since 1966 to prevent excessive bleeding in certain medical conditions. It has received renewed attention because Australia's evidence-based Patient Blood Management (PBM) guidelines now recommend its use in a number of clinical situations. Additionally, a highly-publicised major clinical trial showed that TxA safely reduces the risk of bleeding to death in trauma patients by 30%.

What are the pros and cons of using TxA in trauma?

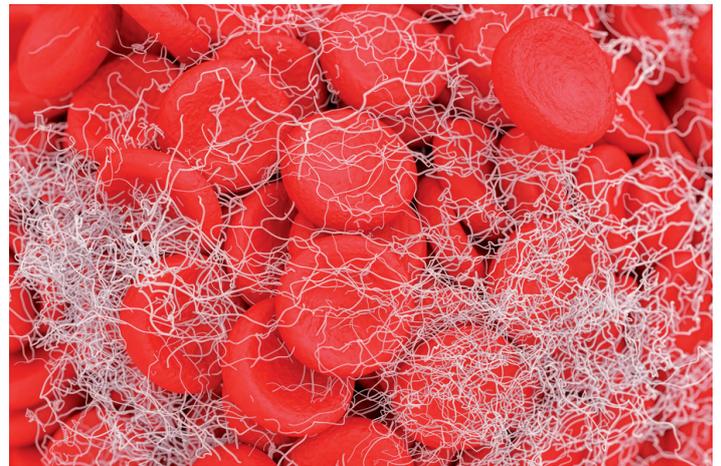
The Clinical Randomisation of an Antifibrinolytic in Significant Haemorrhage (CRASH-2) studied more than 20,000 bleeding trauma patients from 40 countries. The trial showed TxA reduces mortality (death) in bleeding trauma patients by 30% without seeming to increase unwanted clotting. PBM guidelines now recommend use in acutely bleeding critically ill trauma patients within three hours of injury.

Concerns about whether these findings can be generalised have since been published. This is because there are differences in the ability of some of the countries studied to provide advanced critical care support and trauma care to patients. There are also differences in the ability to determine the extent of bleeding and clotting problems.

What are other uses of TxA?

The PBM guidelines recommend the use of TxA in any surgery where substantial blood loss is anticipated and in cardiac surgery. In addition, the guidelines recommend consideration of use in critically ill patients with upper gastrointestinal bleeding.

TxA is used to prevent excessive bleeding in military casualties. Early use in ambulances is also being trialled with the PATCH-Trauma study underway to further investigate this strategy in Australia.



Why use TxA instead of blood components?

It is cheaper to supply than blood products and it is also easier to transport and store – it is a synthetic product that does not have a short shelf life and requirement for temperature and other handling controls.

Why is this relevant to the Blood Service?

The Blood Service supports patient blood management strategies that focus on appropriate blood use; including those to reduce or avoid the need for blood transfusion where alternatives exist.

BLOOD FACT

Tranexamic acid was added to the World Health Organization's list of essential medicines in March 2011 after the results of the CRASH-2 trial were published.