

Data to clinical decision: My experience with CRASH and PATOS

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ABSTRACT

Summary: I was involved with Clinical Randomisation of an Antifibrinolytic in Significant Haemorrhage (CRASH 2) from 2009-2010 as site Principal Investigator (PI) and later as the national PI for the Clinical Randomisation of an Antifibrinolytic Significant Head Injury (CRASH 3) from 2013 – 2017. Both studies were international multicentre clinical trials on the use of tranexamic acid (TXA) in trauma. It was headed by the Clinical Trials Unit (CTU) of the London School of Hygiene and Tropical Medicine. CRASH 2 trial confirmed the efficacy of TXA in acute traumatic haemorrhage, with one-third reduction in mortality when given within three hours of injury. This has led to the use of TXA for early trauma cases in Malaysia. Knowing TXA works better when given early, Shah Jahan et al in Medical Journal of Malaysia proposed that TXA be given by the Malaysian paramedics in the pre-hospital environment. CRASH 3 involved 13 hospitals in Malaysia. The CTU sent frequent newsletters and updates on the current state of randomisation across the world to encourage and support the researchers. When CRASH 3 ended, Malaysia was the 3rd highest recruiter. The results of the trial showed that TXA reduces head injury deaths. CTU publicised the findings via the press, TV and social media for the public to be aware. We should also express the significant findings of our research in a similar manner. From the CRASH 2 and CRASH 3 trials we have come out with an algorithm for the use of TXA for trauma patients including those with head injury. The use of TXA acid for trauma patients within 60 minutes of medical contact has become a Key Performance Indicator for the Emergency Medicine and Trauma services. Pan Asia Trauma Outcome Study (PATOS) started in Malaysia in 2016 and I am involved as the National PI. PATOS is a multicentre registry on trauma patients brought to the emergency department via the ambulance services in the participating Asian countries. The PATOS is still on going. The PATOS Clinical Research Network based in Seoul, South Korea encourages research based on the PATOS data by having yearly workshops and research day. There are already publications from the PATOS. PATOS Malaysia had a workshop in 2020 to encourage research writing from Malaysia PATOS data. At the moment the PATOS has also become the master's dissertation for some emergency medicine postgraduate students. The research findings can be then use to develop policies and protocols for the trauma patients in Malaysia. Data collection can be a long-haul process and needs constant motivation to stay on track. Results from studies should be disseminated widely via the use of the social media, conventional media, meeting and conferences.