Tranexamic acid in the prehospital setting: Israeli Defense Forces' initial experience.


BACKGROUND: The leading cause of preventable death in the military setting is haemorrhage. Accumulating evidence has established the benefit of tranexamic acid (TXA), an antifibrinolytic, for treating traumatic haemorrhage in the hospital setting. The use of TXA in the prehospital setting, however, has not been previously described. The present study details our initial experience with a field protocol that advances TXA administration to (or as close as possible to) the point of injury.

METHODS: We present a series of all casualties treated with TXA by Israel Defense Forces' (IDF) prehospital advanced life support providers between December 2011 and February 2013. Data were abstracted from the IDF Trauma Registry at the Research Section of the Trauma and Combat Medicine Branch, Surgeon General's Headquarters.

RESULTS: Forty casualties who received TXA in the prehospital setting were identified. Most casualties were male (n=35; 88%) and young adults (median 28 years). The mechanism of injury was penetrating in 22 cases (55%). TXA was administered earlier than it could have been in the hospital setting without delaying evacuation. There were no reports of adverse outcomes that could be reasonably attributed to TXA. Casualties who received TXA per protocol were sicker than those who received it not per protocol.

CONCLUSIONS: We have shown that TXA may be successfully given in the prehospital setting without any apparent delays in evacuation. In light of recent evidence, the ability to give TXA closer to the time of wounding represents an important step towards improving the survival of trauma victims with haemorrhage, even before definitive care is available. While this may be especially relevant in austere combat environments, there is likely benefit in the civilian sector as well. The safety profile of TXA is an important consideration as prehospital personnel tend to overtreat casualties without indications for TXA per protocol. We suggest that TXA be considered a viable option for use by advanced life support providers at or near the point of injury.