Tragedy into drama: an American history of tourniquet use in the current war.


ABSTRACT: Although the scientific results of recent tourniquet advances in first aid are well recorded, the process by which tourniquet use advances were made is not. The purpose of the present report is to distill historical aspects of this tourniquet story during the current wars in Afghanistan and Iraq to aid scientists, leaders, and clinicians in the process of development of future improvements in first aid.

METHODS: The process of how developments of this tourniquet story happened recently is detailed chronologically and thematically in a who did what, when, where, why, and how way.

RESULTS: Initially in these wars, tourniquets were used rarely or were used as a means of last resort. Such delay in tourniquet use was often lethal; subsequently, use was improved incrementally over time by many people at several organizations. Three sequential keys to success were (1) unlocking the impasse of enacting doctrinal ideas already approved, (2) reaching a critical density of both tourniquets and trained users on the battlefield, and (3) capturing their experience with tourniquets. Other keys included translating needs among stakeholders (such as casualties, combat medics, providers, trainers, and decision-makers) and problem-solving logistic snags and other issues. Eventually, refined care was shown to improve survival rates. From all medical interventions evidenced in the current wars, the tourniquet broke rank and moved to the forefront as the prehospital medical breakthrough of the war.

CONCLUSION: The recorded process of how tourniquet developments in prehospital care occurred may be used as a reference for parallel efforts in first aid such as attempts to improve care for airway and breathing problems.