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Penetrating abdominal war wounds: epidemiology and causes of death in 1000 cases in an independent Non Governmental Organization hospital in Lashkargah, Afghanistan.

Background. Management of abdominal penetrating war injuries have been reported in several studies, almost all from military institutions. Patient population can significantly differ from civilian to military setting.

Aim. This study reports epidemiology, mechanisms of injury and causes of death in patients with penetrating abdominal war injuries in the "Emergency" independent international NGO hospital in Lashkargah, Afghanistan.

Methods. We reviewed the records of all patients with penetrating abdominal injuries treated from January 2006 to December 2016 at the Emergency NGO hospital. Demographic and clinical data were recorded. Uni and multivariate analysis were used to verify variables significantly associated with death.

Results. 953 patients were treated for penetrating abdominal injury at the "Emergency" NGO hospital in Lashkargah. Mechanism of injury was bullet injury (BI) in 589 patients, shell injury (SI) in 246, stab wound (SW) in 97 and mine injury (MI) in 21. Small bowel injury was the single most frequent abdominal lesion (46.3%). Small and large bowel injuries were the most frequent in the blast groups (SI and MI), stomach injury in SW. Overall mortality was 12.8%. Age >34, mine and bullet injury, length of stay, time since injury >5 hours, ISS >17 and associated injuries were significantly associated with death.

Discussion. To our knowledge, this is the first report of abdominal penetrating war injuries from a non-military institution, independent NGO. Patient population and mechanisms of injury can significantly differ from civilian to military setting, and a civilian hospital in a war zone has normally limited resources, is not a part of the echeloned care, no medical evacuation is possible and primary and secondary surgery are done in the same hospital. Study population is mainly civilian with a significant number of women (12.1% overall and 17.1% in the shell injury group) and patients under 14 (200, 21%). Mean age of the study group is very young (23) with patients injured by blast (shells and mines) significantly younger than in the other groups. Most frequent mechanism of injury was bullet injury. Injury to the IVC, bladder, duodenum, right and transverse colon and portal vein significantly carried higher mortality rates.