

Assessment of Kasr Al-Ainy protocol in management of hemodynamically unstable pelvic fractures

Ahmad S. Abu-Taleb

Background: Mortality rates in pelvic fractures range from 5% to 16%. The complexity of pelvic trauma and high mortality rates lead to the evolution of multidisciplinary approaches to deal with the challenge. In Cairo university hospitals, the pelvic trauma team set up a protocol using available resources to manage such cases.

Methods: From December 2013 to September 2014, we applied the protocol on 31 patients presenting to the emergency department with hemodynamically unstable pelvic fractures with systolic blood pressure (SBP) < 100 mmHg, Tile B&C fractures and excluded extra pelvic injuries responsible for the instability. The protocol started with circumferential compression using a wrapped sheet in coherence with adequate resuscitation. The sheet was removed 24hrs after stabilization. In persistent instability, patients underwent anterior external fixation. In cases remaining unstable despite external fixation, pelvic packing was done.

Results: Among 31 patients included in the study, mean age was 27.2 years and 60% were due to road traffic accidents. Tile B fractures constituted 80% of cases and the rest were type C. Emergency department SBP was 82.10 ± 9.2 mmHg and heart rate was 126.4 ± 16.4 beats/min. Time to stabilization was 5.67 hours ± 4.38 hrs. Circumferential pelvic compression was applied to all 31 patients on admission and 11 patients (35.5%) required anterior external fixation which resulted in significant increase in SBP ($p < 0.001$). One patient required pelvic packing. Four patients (12.9%) died despite resuscitative efforts.

Conclusion: The suggested protocol is effective in management of hemodynamic instability and yielded results that were comparable to other trauma centres regarding mortality rates. Modifications are required to address the time lapse between admission and stabilization.