Paper No. 2

Lessons learned from war: a comprehensive review of the published experiences of the Iranian neurosurgeons during Iraq-Iran conflict and review of the related literature

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Abstract:

Background: The present study was aimed to review the articles published by Iranian neurosurgeons regarding their experiences during Iraq-Iran 8-year conflict and compare it with reports from other conflicts.

Methods: The relevant papers and studies, published up to December 2011, were searched from three databases including MEDLINE, and two Iranian databases of Iran Medex and Scientific Information Database with the keywords Iran, Iraq, conflict, battle, war, traumatic aneurysm (TA), post-traumatic epilepsy (PTE), brain infection, penetrating head wound (PHW), cerebrospinal fluid (CSF) leakage, spine injury and peripheral nerve injury.

Results: A total of twenty-eight papers were found that presented PHW, development of TA, infections, PTE and peripheral nerve injuries. There were two different protocols for management of PHWs: radical surgery and minimal debridement protocol. The overall CNS infection rate was 10%. The cumulated incidence of TA was 6%.

Conclusion: Conservative minimal debridement of the wounds was indicated in patients with small entrance wounds, or those with GCS greater than or equal 8 and no progressive neurological deficit. To diagnose TA before rupture angiography was performed in patients with shells or bone fragments, passed through the crowded vasculature, or with large/delayed hematoma, or if the surgeon had high index of suspicion based on neuroimaging and early debridement surgery. Surgery in a well-equipped nearby hospital after quick and safe evacuation of the victims by trained-salvaging-ancillary groups, administration of broad-spectrum antibiotics and proper antiepileptic drugs decreased the morbidity and mortality of casualties after PHW in war situations. The biases of the case selection, data collection, confounders and decreasing biases by conducting blinded controlled clinical trials were discussed.

Keywords:

CNS infection, Iraq-Iran conflict, Penetrating head- wound, Post-traumatic- epilepsy, Peripheral nerve injury

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