

EQUESTRIAN INJURIES: PREVALENCE, INJURY PATTERNS AND RISK FACTORS FOR 10 YEARS OF MAJOR TRAUMATIC INJURIES

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Purpose: Horseback riding is considered more dangerous than motorcycle riding, skiing, automobile racing, football and rugby. Our purpose was to identify the prevalence and injury pattern, as well as rider, animal and environmental risk factors associated with severe equestrian trauma in a predominantly Western style riding population.

Methods: All patients with major equestrian injuries ($ISS \geq 12$) admitted between 1995 and 2005 were reviewed. Each patient also completed a 46 question survey outlining potential rider, animal and environmental risk factors.

Results: One hundred and fifty-one of 7941 (2%) trauma patients were injured while horseback riding. Their mean ISS was 20, length of hospital stay 13 days and mortality rate 6%. The most common sites of injury were chest (54%), head (48%), abdomen (22%) and extremities (17%). Forty-five percent required operative therapy, with 9% of patients undergoing laparotomy and 8% craniotomy. Seventy-eight of 141 (55%) alive patients completed the survey. Both riders and horses were very well trained (27 years riding experience). Many (38%) were employed around horses and 47% had been injured previously. Falling (60%) because of a "spooked" (35%) or over-maneuvered (27%) horse was the most common mechanism. Only 9% of patients wore helmets. Fifty-five percent of respondents had chronic physical difficulties as a result of the accident, however 87% continued to ride. Sixty-four percent believed the accident was preventable and 47% altered their riding habits after the injury.

Conclusions: Equestrian injuries are a small but significant portion of the severely injured patient population presenting to major trauma centers. Chest trauma has been underappreciated in previous studies comprised of lesser injuries. This injury pattern may be a result of significant rider experience. Helmet and vest use will be targeted in future injury prevention strategies.