

A study on presentation and outcome of bull gore injuries in a group of tertiary care hospitals

D. Suryaprabha*

Chief Clinical Pharmacist and Assistant Manager - Clinical Research, Kauvery Hospitals, India

Abstract

Background: Bull Gore Injuries are commonly observed in rural areas of India as a result of the animal's use in sporting events as well as for agricultural purposes. The majority of these are managed at the primary care level but a substantial number of victims are still referred to tertiary care centres.

Methods: This was a prospective study of 28 patients, who were admitted to group of tertiary care hospitals for the period of one year between March 2022 and February 2023 with a reported history of bull-related injuries.

Results: Most of the patients came from rural area except two who were from city. Males were maximum injured compared to females; only one female was injured. Most commonly affected age group are middle age of 21-30 years and their percentage was

39.3%. They were discharged from the hospital within 5 days in 16 patients at a percentage of 57.1%. Surgery was required for 19 patients at a percentage of 67.9%. 24 patients were discharged alive, a percentage of 85.7. Four patients were discharged against medical advice (AMA), a percentage of 14.3%.

The outcome: Mean hospital stay was 6 days with a range of 1 to 25 days. There was no Mortality reported in this study.

Conclusion: Bull-related injuries may result in significant morbidity and mortality.[4] Education of the population about the dangers of bull injuries from sporting events and the need for early transportation to the Emergency Department (ED) have the potential to achieve significant reduction in morbidity and mortality.

Keywords: Against medical advice (AMA), Emergency Department (ED), Bull Gore Injury, Jallikattu, morbidity and mortality

Background

Bull-related injuries are commonly observed in rural areas of India as result of the animal's use in sporting events as well as for agricultural purposes. The majority of these are managed at the primary care level but a substantial number of victims are still referred to the tertiary care centers. They may take the form of abdominal, thoracic, ENT, orthopaedic, neurological or commonly, soft tissue injuries. So far there have been no studies that have attempted to analyze these injuries. This study was undertaken with this in mind so that the various types of injuries and the age and sex distribution, hospital stay, in hospital outcome, department admissions, surgery taken, mortality and morbidity and other factors can be analysed to some extent [2]. Jallikattu, a traditional Hindu festival and an essential part of Tamil culture, is a

practice by peasants to safeguard their pure-bred, indigenous bulls. Since cow breeding has increasingly become an artificial process, bulls are typically used for farming and meat. But Jallikattu provides peasants and farmers with an opportunity to preserve the indigenous breed of bulls. Jallikattu is a combination of the terms "calli" (coins) and "kattu," which means "a bundle of coins tied to the bull's horns" (knot). Taking this bundle off the animal's head used to earn the tamer money or silver in the past. [1]

Methods

This was a prospective study of 28 patients, who were admitted to group of tertiary care hospitals for the period of one year between March 2022 and February 2023 with a reported history of bull-related injuries taken. All the cases due to bull gore injury were included in this study.



Results

Bull gore injuries are not very common, and in this series 28 injuries occurred over a 1-year period. The abdominal injuries in this series were intriguing in that the wounds were most commonly sited on the right side of the abdomen. There are several possible explanations for this pattern of injury. The head and therefore the horn of the attacking animal follows a semi-circular path sideways or upwards and since the beast's head is at the same level as the patient's abdomen, this part of the human anatomy is most exposed to injury. [3]

Most of the patients came from the rural area except two who were from the city. Males were maximum injured compared to females; only one female was injured. Most commonly effected age group are middle age of 21-30 years and their percentage was 39.3%. The duration of hospital stay was within 5 days in 16 patients at a percentage of 57.1%. Surgery was needed for 19 patients, at a percentage of 67.9%. 24 patients were discharged alive, in percentage of 85.7. Four patients were discharged against medical advice (AMA) in a percentage of 14.3%. The outcome: Mean hospital stay was 6 days with a range of 1 to 25 days. There was no Mortality reported in this study.

Table 1. Age and sex distribution

Age (years)	Female	Male	Total
1-10	0	1	1 (3.6 %)
21-30	0	11	11 (39.3%)
31-40	0	3	3 (10.7%)
41-50	0	5	5 (17.9%)
51-60	1	4	5 (17.9%)
61-70	0	1	1 (3.6 %)
71-80	0	2	2 (7.1 %)
Total	1	27	28

Table 2. Length of stay, surgery and status of discharge

LOS	Total	Surgery Done	Total	Total Patient	Status of Discharge	Total
0-5	16 (57.1)	Total	19 (67.9 %)	28	Alive	23 (82.1 %)
16-20	2 (7.1)				AMA	4 (14.3 %)
21-25	1 (3.6)				Alive	1 (3.6%)
6--10	9 (32.1)				Total	28
Total	28					

Table 3. Department distribution

Department	Total
Gastroenterology	8
Neurology	4
Orthopaedics	4
Urology	4
Plastic Surgery	3
General Medicine	2
Anaesthesiology	1
ENT	1
Vascular Surgery	1

References

- [1] <https://www.wionews.com/india-news/jallikattu-2023-date-check-history-significance-important-facts-bulls-their-owners-all-you-need-to-know-551998> .

Conclusion

Bull Gore injuries may result in significant morbidity and mortality.[4] Education of the population about the dangers of bull injuries from sporting events and the need for early transportation to the ED has the potential for achieving a significant reduction in morbidity and mortality. Jallikattu, a popular sport in Madurai, Tamil Nadu, is practised during the Mattu Pongal celebration, which honours the role of cattle in the livelihood of Indian farmers.

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