

# Demographics of firecracker induced hand blast injuries in HoSHAS

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## INTRODUCTION:

Firecrackers or “mercun-bola” is notoriously known to be used in farms and estates to scare away animals and pests. Yet due to its homemade manufacturing and unpredictable nature, it is the main contributor to blast injuries at our centre.

## METHODS:

A Retrospective analysis of EMR records involving all patients with firecracker induced blast injuries involving hands from January 2021 to March 2022 was conducted. A total of 20 patients were selected. Exclusion criteria were blast injuries due to gunshot wounds or involving other body parts.

## RESULTS:

From the data 80% were males, age ranging from 10-79 with a mean of 40-years-old. Right side injuries were seen in 65% of patients and one to three digits were most commonly involved. The most commonly injured finger was the middle finger and the most common type of injury were fracture related injuries.

Table 1: Demographic of blast injuries

Gender	Male	16(80%)
	Female	4(20%)
Age	10-79 years (Mean: 40±18.72)	
Side	Right	13(65%)
	Left	7(25%)
No of digits involved	1	5(25%)
	2	5(25%)
	3	5(25%)
	4	3(15%)
	5	1(5%)
	>5	1(5%)

Injured parts	Hand	3(6%)
	Thumb	7(13%)
	Index	14(27%)
	Middle	17(33%)
	Ring	8(15%)
	Little	3(6%)
Severity of injury	Total/near total amputations	4(20%)
	Open/closed fractures	13(65%)
	Isolated soft tissue injuries	3(15%)

## DISCUSSIONS:

It is hypothesized that radial three fingers are most commonly affected as patients are usually still grasping or in mid throwing positions when they receive these blast injuries.

There are many classifications used to describe blast injuries, yet management of these injuries need to be tailored based on the patients unique injury. In our case series management varied from wound management and dressing to surgical debridement or amputation.

## CONCLUSION:

Blast injuries present with varying spectrum of injuries from abrasions to total amputations. Agricultural workers should be educated on the dangers of homemade firecracker usage to prevent hand blast injuries.

## REFERENCES:

1. Hazani R, Buntic FR, Brooks D.2009.Patterns in Blast Injuries to the Hand. Hand(NY). Mar;4(1):44–49.