

# Demographic Properties of Civilians with Blast Injuries in Southeastern Anatolia Region

Omer KACMAZ,<sup>1</sup> Recep DURSUN,<sup>1</sup> Hasan Mansur DURGUN,<sup>1</sup> Mehmet AKDAG,<sup>2</sup> Murat ORAK,<sup>1</sup>  
Mehmet USTUNDAG,<sup>1</sup> Cahfer GULLOGLU<sup>1</sup>

<sup>1</sup>Department of Emergency Medicine, Dicle University Medical Faculty, Diyarbakir

<sup>2</sup>Department of Ear Nose and Throat, Dicle University Medical Faculty, Diyarbakir, both in Turkey

## SUMMARY

### Objectives

The present study conducted demographic analysis of blast injuries, with the authors aiming to guide the determination of groups and regions at risk, helping hospitals take preventive measures and providing information for accurate triage, rapid intervention, multidisciplinary approach, and lowering workforce losses.

### Methods

This study retrospectively examined the demographic properties of civilians who presented to the Emergency Department of Dicle University after being injured in explosions of various origins between January 2005 and September 2013 in the Southeastern Anatolia Region of Turkey.

### Results

Of the study population, 85.50% were male and 14.50% were female. The explosive responsible for injury was a mine in 20.51% of the cases, a bomb in 29.06%, a squib in 14.53%, dynamite in 7.69%, and some other explosive in the remaining 28.31%. Of those injured, 35.90% were students, 21.36% were farmers, 11.10% were shepherds or drivers, and 31.62% were from other occupational groups.

### Conclusions

In conclusion, injuries resulting from explosions are associated with higher morbidity and mortality rates, making it necessary to increase the number of trauma centers and emergency action teams in that region, as well as demining the region and educating the native population about explosives.

**Key words:** Amputation; blast injury; explosives.

**Submitted:** October 24, 2014 **Accepted:** November 18, 2014 **Published online:** February 18, 2015

**Correspondence:** Recep DURSUN, M.D. Dicle Universitesi Tip Fakultesi, Acil Tip Anabilim Dalı,  
21280 Diyarbakir, Turkey.

**e-mail:** drreceptursun@hotmail.com



© 2015 Emergency Medicine Association of Turkey. Production and Hosting by Elsevier B.V. Originally published in [2015] by Kare Publishing. This is an open access article under CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

## Introduction

Southeastern Anatolia Region is one of seven geographical regions in Turkey. It is the smallest, but most densely populated region. Syria and Iraq border to the south and Iran to the east. This region has the highest terrorism and smuggling rates in Turkey and its borders with neighboring countries have not been cleared of land mines. Hence, blast injuries due to explosions are common. Among civilians, explosions are encountered mostly due to terrorist activities. Although bombs are used during war, they may also rarely cause multiple blast injuries in peacetime as well. Nevertheless, substances with explosive properties other than bombs are also encountered in daily life, albeit rarely.<sup>[1]</sup> These include propane cylinders, automobile LPG systems, oil barrels, lighters, or even everyday tools that are seemingly harmless, such as pressure cookers, fireworks, squibs, vehicle power supplies, and electric panels.<sup>[2]</sup> In places where terrorist activities take place, explosives are used and when terrorist activities scale up, use of explosives shows a parallel increase.<sup>[3,4]</sup>

Mines are laid during wars or for security reasons during peacetime and have enormous explosive power. They potentially remain underground or on soil for years after wars because land mines are not regularly mapped.<sup>[3,4]</sup> Land mines reduce the use of farmland,<sup>[5]</sup> delay infrastructure and government investments, and prevent the inflow of foreign capital due to the fear and threat experienced in these regions. It is reported that the cost of clearing mines is a hundred times their production cost<sup>[6,7]</sup> and that treatment costs for a mine victim are more than a thousand times their production cost. Unfortunately, thousands of new land mines are laid each year, most of which will never be cleared.<sup>[6]</sup> Fertile lands and historical places also suffer from land mines, harming agriculture and tourism. In our country, no clinical scoring or triage technique is widely used for occupational accidents, blast injuries due to domestic appliances, or certain explosives used for terrorist activities. Moreover, injury and mortality rates remain high due to lack of regulatory restrictions. This study aimed to guide the determination of groups and regions at risk, helping hospitals take preventive measures and providing information for accurate triage, rapid intervention, multidisciplinary approach, and lowering workforce losses by conducting demographic analysis of blast injuries.

## Materials and Methods

This study retrospectively examined the demographic properties of 117 civilians who presented to the Emergency Department of Dicle University, Faculty of Medicine, after being injured in explosions of various origins between January 2005 and September 2013 in the Southeastern Anatolia Region of the Republic of Turkey. This article is a cross-sectional observational study. All patients were examined,

resuscitated in compliance with ATLS (Advanced Trauma Life Support), and treated per available protocols for diagnosis and treatment in the emergency department.

### Inclusion criteria

- 1- Injuries to civilians with materials meeting the criteria set for explosives
- 2- Injuries caused by explosions occurring in peacetime
- 3- Injuries with hospital records which were accessible from the Dicle University Faculty of Medicine, Emergency Department.

### Exclusion Criteria

- 1- Injuries to security or military personnel
- 2- Blast injuries during wartime
- 3- Other traumatic injuries (firearm wounds, traffic accidents, and falls from a height, etc.)

### Data Analysis

Patient data recorded in sociodemographic forms included age, sex, site of incident (rural/urban/abroad), distribution of injured body parts (extremity, head, thorax, abdomen, other), location and distribution of extremity amputation, clinic of admission, type/site of explosion, distribution of clinical outcome of explosion, and distribution of occupation by type of explosive materials (mines, bombs, squibs, dynamites). Statistical analyses were performed using SPSS for Windows Ver. 15.0. Univariate analyses were performed using the Chi-Square test ( $\chi^2$ ) for categorical variables and the student's *t* test for continuous variables. The study data were expressed as Mean $\pm$ SD. A *p* value less than 0.05 was considered statistically significant.

## Results

This study retrospectively examined 117 patients who presented to the emergency department of Dicle University, Faculty of Medicine, after a blast injury between January 2005 and September 2013 and met the inclusion criteria. (Tables 1, 2, 3, 4)

The rate of dynamite explosions was 7.69%. Of these patients, 6.84% (*n*=8) were farmers. Dynamite-induced injuries affected significantly more farmers than any other occupation (*p*<0.05). Although statistically non-significant, some explosives affected particular worker classes more frequently, with shepherds being more affected by mines and dynamite and the majority of those injured by squibs were students (8.55%) and craftsmen (3.42%). The majority of our patients injured by bombs were students (11.97%) and craftsmen (6.84%).

Download English Version:

<https://daneshyari.com/en/article/2604057>

Download Persian Version:

<https://daneshyari.com/article/2604057>

[Daneshyari.com](https://daneshyari.com)