Managing the Patient Evidence Base Through Trauma Cases in Military University Hospital of Albania

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Received 24/May/ 2018; Accepted 30/June/ 2018 / Published online: 20 July 2018
https://doi.org/10.32391/ajtes.2018.2.2.016

Abstract

Background The level of management of traumatic health care services in Albania as a service of the Military University Hospital in Emergency Care differs in relation to other university hospitals across the country, mainly due to changes in the public health of the population. The article aims to present the management of traumatic patients at the Military Hospital in Albania, providing examples of the number of cases that have been addressed in the spread of this disease as epidemiology in Albania. The literature review and data statistics will be carried out by using the hospital records that will be used for further research in Albania. In addition, there is a study of international reports on Trauma management issues, trauma care and quality in Trauma. Much of the results consider the necessity of adopting a comprehensive traumatic system, focusing on quality management and improving trauma care to increase survival and reduce complications to the wounded. Urban conditions and public health policies are the most important factors in developing and implementing programs to improve emergency trauma care services. The heterogeneity of the population and its geographical distribution, the complexity of road accidents, are challenging factors for quantitative research on trauma management and the effectiveness of its care. Staff training in all areas, combined with the existence of modern vehicles and equipment, means of communication and timely transfer of the ambulance, contribute to the treatment of patients with urgent trauma, life saving and prevention of all types of disabilities.
Keywords. Military University Hospital, health trauma management, information, quality of trauma patients

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Introduction

In Albania, roads are a local public concern and are the main cause of trauma from accidents. Road safety is the goal of national, regional interventions aimed at preventing trauma. (Hughes et al, 1995). Albania, for its bad luck, is far behind the provision of road safety in relation to the EU average, the number of accidents[1] the number of deaths from car accidents. Road traffic accidents are a consequence of the loss of resources, resources and human resources. At one time, there is a considerable cost to society. This abstract realizes a presentation and assessment of the trend of trauma in Albania, the results of which can be used as a reference guide for designing and evaluating trauma management elements in the country.

Chapter I

University Hospital of Trauma & Military Hospital

In Albania, the Central Military University Hospital is a tertiary hospital which provides a specialized poly trauma health care. The Central Military University Hospital has the university status from the beginning of year 2002[2] The Trauma & Military Hospital is the only specialized hospital in the country, qualified with the mission "trauma management at the national level". The hospital has specialty basis: Emergency, Surgery, Orthopedics, Neurosurgery, ENT, Ophthalmology and Maxillofacial, ICU, Reconstructive Surgery, Therapy and Rehabilitation services. It has a capacity of 192 beds, but in emergencies, disasters and catastrophes the capacity increases up to 250 beds with 321 people as staff (81 doctors, 200 nurses, technicians pharmacists, 40 administration & logistics). In a Military Hospital, the emergency department receives an average of 7 – 8 patients with poly trauma every day, of these patients, some present directly and many are referred from other hospitals from the different regions because the hospital is located in a strategic geographic position. It is nearby crucifying the national road north-south, which makes possible the transportation of the wounded in a car accident on time. At the moment various problems are faced in the management of patients with poly trauma. In EU[3], road accidents annually lead to the death of more than 40,000 people, while the number of people involved exceeds 1.7 million. The most vulnerable group of people is 14 to 25 years old, where accidents in the streets are the cause of death. The main indicators of road safety in Albania have shown improvement, however, what they are doing in comparison with the EU.

Chapter II

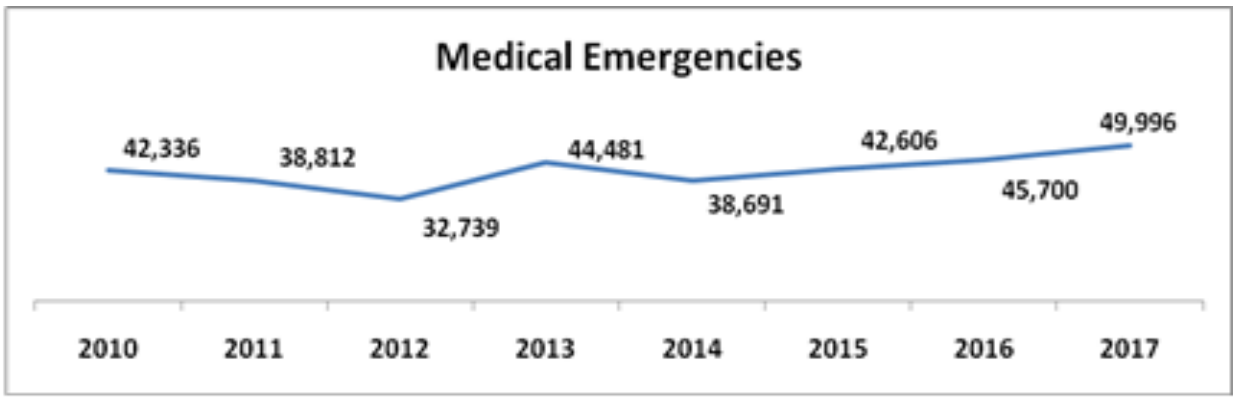
Trauma cases in Albania: the period of 2010 – 2017 years

Our study has found a high percentage of admissions for hospital trauma for the period 2010 - 2017. In order to manage this situation, the number of traumas increases is a reflective and retrospective study of trauma management in the hospital. The studies are pointing to the statistical statistics of the Hospital, reviewing the clinical patient screenings that have been presented to the Emergency

[1] European Commission, Annual Accident Report. European Commission, Directorate General for Transport, June 2016.
[2] Council of Ministers no. 375, date 13.07.2002

[3] Accidents at work statistics, Eurostat Statistics Information, November 2016

Hospital during the last few years. Emergency service has received 335 361 emergency patients, from 2010 to 2017. 64% of them have had surgical emergencies and 36% of them therapeutical urgencies.



Years	Total	Surgery	Medicine in Emergency
2010	42.336 (12.62%)	24.849 (11.58%)	17.487 (14.49%)
2011	38.812 (11.57%)	22.173 (10.33)	16.639 (13.79%)
2012	32.739 (9.76%)	19.312 (9%)	13.427 (11.12%)
2013	44.481 (13.26%)	22.100 (10.29%)	22.381 (18.54%)
2014	38.691 (11.54%)	26.847 (12.51%)	11.844 (9.81%)
2015	42.606 (12.70%)	30.392 (14.16%)	12.214 (10.12%)
2016	45.700 (13.63%)	32.334 (15.06%)	13.366 (11.07%)
2017	49.996 (14.91%)	36.661 (17.08%)	13.334 (11.05%)
Total	335.361 (100)	214.668 (100)	120.693 (100)
Average	41.920 ˜ 42.000	˜ 27.000	˜ 15.000

Graph 1, Table 1 The medical emergencies (2010 – 2017)

In 2017, there were 103.360 people out of which 62.2% males, with average age of 54.12 years. A total of 48.65% are emergency examiners, 46.90% of Intervention and Microsurgery in Emergency ODS, 4.44% of patients are treated with daily card (24 hours), with cardiac admissions from hospital emergency to 66.7% of cases. In most cases, this may be related to a study that would last long.

However, we do not consider that any day occasion was avoided by the hospital. The average time devoted to the study was on average 30 days, a little higher than expected, due to the high spread of the number of traumas in recent years. It was decided to study 80% of patients admitted in emergencies for 2017, their diagnosis was identified in all cases treated in emergencies because of 80% of the total number of patients. According to the census in medical emergencies during the past three years, etiology of trauma in UTMH emergency is (i) car accidents 12%; (ii) gunshot wound 4.8%; (iii) work trauma 38.8%; (iv) wound caused by blind and sharp tools19.4%. In Albania, the number of deaths by main causes period 2015, 2016, 2017 show that the number of accidents in Albania has been increasing. In 2017, the number of accidents increased by 38.23% compared to 2016. The number of deaths in Albanian roads during the period 2000-2017 was 37.1%. However, although there has been a significant increase in the number of deaths, there has been a significant deviation from the goal set in Albania, this can be described as a period that is not used enough to reduce the number of accidents.

Causes of death	*2015*	*2016*	*2017*
Natural	86,8	87,4	86,5
Accident	2,2	2,1	3,4
Suicide	1,0	1,1	1,5
Homicide	0,4	0,4	0,4
Accidentwork	0,3	0,2	0,2
No information	9,3	8,8	8,00
Total	100,0	100,0	100,0

Table 2 The percentage of deaths by main causes: 2015-2016-2017

Year	*Hospitalization*	*Morbidity*
2010	7.423 (14.94%)	2.1
2011	6.023 (12.11%)	2.5
2012	5.770 (11.62%)	2.1
2013	4.835 (9.73%)	2.2
2014	5.827 (11.72%)	2.0
2015	5.870 (11.81%)	3.0
2016	6.472 (13.02%)	2.0
2017	7.475 (15.04%)	2.0
Total	**49.695 (100)**	**2.2**
Average	**6.200 ˜ 6.500**	**˜ 2.2**

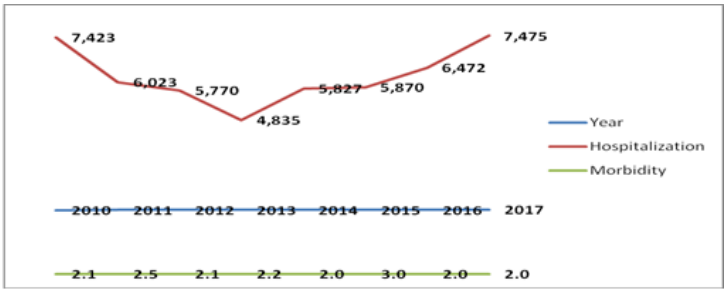


Table 3, Graph 2 The trauma hospitalization by period 2010-2017

It turns out that the mortality is constant while the number of cases hospitalized by Trauma is growing; 13.41% compared to 2016. And in the total of the period 2010-2017, their average/1000 is 6,200 patients (2.2 morbidity).

	2010	2011	2012	2013	2014	2015	2016	2017
Hospitalization	7,423	6,023	5,770	4,835	5,827	5,971	6,620	7,475
Surgery Hospitalization	5,421	4,639	4,516	4,108	5,033	5,269	5,784	6,678
Trauma in Total	2,597	2,272	2,418	2,354	2,432	3,135	3,204	4,971
Incidence (Trauma ÷ Emergency)	61,3%	58.5%	73.8%	53%	62.8 %	73.5 %	70,1 %	99,4 %

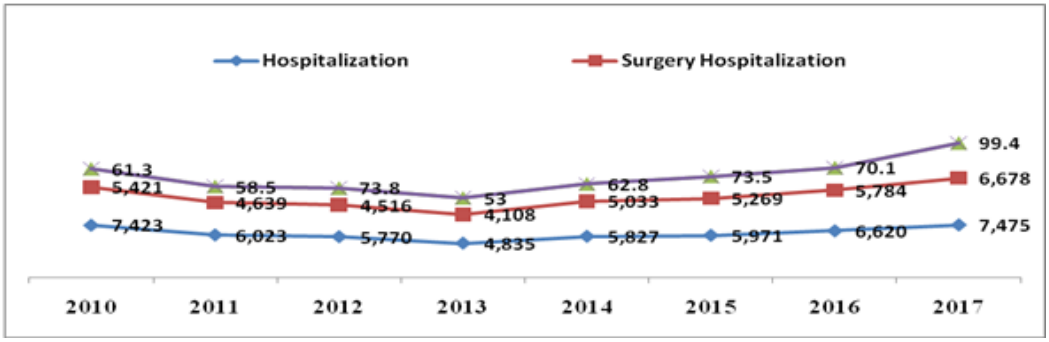


Table 4, Graph 3 The surgery hospitalization and the incidence by period 2010-2017

The incidence of traumas in Albania has been rising considerably by 99.4% for 2017, from which 6,678 patients have undergone operational interventions and 7475 patients have been hospitalized. The incidence trend is growing considerably for the country. WHO (2016), estimated that, 1.2 million deaths occurred due to road accidents, 3242 deaths per day and over 20 million injured each year. The World Bank is working closely with the Global Road Safety Facility for the Strategic Plan 2013-2020, this strategic plan sets out how it will contribute to the broader policy. All transport programmers will have a road safety component as it is expected that deaths due to third country road accidents up to 2020, (daly index) (Murray J. et.al. 1996). Traffic accidents do not have the same meaning among them. As far as accidents are concerned, accidents have been classified as: (i) fatal accidents, (ii) light / light injuries, and (iii) accidents with wounds. In Albania, official accidents are registered from the category (i) serious fatalities and (ii) light injuries.

Chapter III

The management of patient trauma care

According to (Donabedian's theory, 1988) of emergency services, many believe that the "boarding" of emergency patients awaiting inpatient beds compromises quality of care. To assess the quality of care for boarded patients, we used the "structure-process-outcome" framework described

by (Donabedian, 1988). His three part approach makes quality assessment possible assuming structure (attributes of material or human resources and organizational structure) influences process (what is actually done in giving and receiving care), which influences outcome (health status) (Liu et.al., 2011). To better study the quality of care of boarded patients, one should identify and understand the mechanisms accounting for any potential differences in care three components are identified: (i) the structure (facility - infrastructure and human resources), (ii) the processes (organization, operation, organization and provision of social services), (iii) of actions and services). In the Traumatic Hospital, patients are managed based on organizational activity to reduce the patient's waiting time and to improve the quality of trauma care. This is done in the first contact with the patient, where the first clinical practitioner evaluates, treats, and recommends the patient to other services in a safe manner (NSV Health 2012). The provision of quality in the Trauma Hospital implies an assessment of the actual level of services offered and attempts to change them when necessary (Black, 1990). Quality can be measured and the purpose of measurement is (i) confirmation that the full benefits of medical knowledge are successfully applied to the needs of the patients. (ii) maintaining and improving the level of care. (iii) the ongoing assessment with which the profession maintains and defines its standards and remains responsible for the public concerned. (EU, 2016).

Recommendations

Albania is at risk of spreading traumatic epidemics in the country. Trauma work, car accidents occupy a leading place in the epidemiological profile. For this purpose, the steps of defining the Trauma Benchmarking model should be considered to clearly identify what needs to be measured, the quality standards for treating trauma patients, and the electronic database with the patient data to be analyzed and to set the performance gap, set the objectives of action plans according to trauma staff specialties, staff training in all areas, combined with the existence of modern vehicles and equipment, the means of communication and timely transfer of the ambulance, contribute to the treatment of patients with urgent trauma, life saving and prevention of all types of disabilities in Albania.

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