

### MEDICAL AND SOCIAL ASPECTS OF INJURIES AMONG ELDERLY AND SENILE PATIENTS

*Over the past few decades, the demographic situation in the world has been characterized by a progressive increase in the number of older and older persons in the population of almost all developed countries.*

*Since injury is an urgent problem for the elderly, there is an urgent problem in the analysis of the causes of injuries among them with the aim of timely adoption of organizational preventive measures.*

**Keywords:** innovative methods of treatment, elderly and senile age, trauma, trauma care, efficiency

**Introduction.** According to the Agency of Statistics of the Republic of Kazakhstan, our country is not an exception with regard to the number of people of elderly and senile age. In the general structure of the number of citizens, the share of the population aged 65 and over in the total population of the country is 12.9%. As of January 1, 2016, 21.8% of all women are 60 years of age or over, and only 13.4% of the total male population belongs to this age range [1].

Based on the fact that the number of older people will increase in the next few years, the number of injuries to this category of citizens will also increase.

To date, the peculiarities of acute trauma in elderly and elderly people are not paid enough attention. In the domestic and foreign literature there are only single publications devoted to private issues of trauma in the elderly. Given that in our country a significant proportion of people over 60 years of age work, this age aspect have an economic component. Over the past 10 years, the number of working pensioners in the Republic of Kazakhstan has increased by 13.0%. According to the Ministry of Labor and Social Protection, the number of working pensioners is 40.0%, about 90.0% of Kazakhstanis after retirement work for another three years, and 60.0% for another 6 years. It should be noted that treatment of elderly and elderly people is more expensive due to the increase in the duration of inpatient treatment[2,3,5].

So, proceeding from the analysis of direct costs for surgical treatment of this category of citizens on the example of the city of Shymkent, the South-Kazakhstan region, the costs are 10.0% of the annual city budget[1].

In addition, it should be noted that the outcome of injury in elderly and elderly people is much worse, and the number of complications is much higher than in people of a younger age. In the US and EU countries, despite the fact that the treatment and rehabilitation of one such patient with a fracture of the proximal femur varies in the range from 28 to 40 thousand dollars, only 25.0% of the patients recover completely[1].

**The purpose of the study** was to study the characteristics, severity, types of injuries in elderly and elderly patients hospitalized for the treatment of trauma in the trauma department of the Shymkent City Emergency Hospital.

#### **Material and methods.**

The study was conducted on the basis of the Shymkent City Emergency Hospital in the city of Shymkent.

This work is a retrospective medical-statistical and socio-hygienic study.

The analysis of the incidence of trauma and the treatment of injuries in elderly and senile patients was carried out according to the medical records of the trauma department for 2014-2016. The analysis included data from the statistical department, reporting forms No. 14, No. 30, No. 066 / y, form No. 027 / y "Extract from the medical chart of the inpatient patient", elderly and senile patients treated at the Traumatology Department from January 1, 2014 to December 31, 2016. Data on the costs of treating individuals for nosology, the cost of one bed-day were requested in the economic department of the hospital by year.

All data was processed using statistical software SPSS V.19. The results are presented as the mean  $\pm$  standard error. P-value less than 0.05 was considered statistically significant.

#### **Results and Discussion.**

The characteristics of injuries in the elderly hospitalized in the trauma department of the Shymkent City Emergency Hospital are presented in Table 1.

The number of patients per year was as follows: 45 (40.5%) - in 2014, 28 (25.2%) in 2015 and 38 (34.2%) in 2016.

The mean age of patients was  $69.1 \pm 12.9$  years,  $70.0 \pm 7.8$  years and  $72.1 \pm 8.9$  years in 2012, 2013, 2014, respectively.

The number of women prevailed among those hospitalized for three years, with a greater difference in the prevalence of women in 2013.

As can be seen from Table 1, the main mechanism of injury among the elderly is the fall in both street and home trauma, up to 62% of all injuries. After them there are accidents up to 10%, and to a lesser extent industrial and agricultural injuries to 5%.

Table 1 - Characteristics of patients hospitalized in the traumatology Department of Shymkent city hospital of emergency medical care, 2014-2016

Parameters	2014	2015	2016	Pvalue
Quantity of patients, N (%)	45 (40,5%)	28 (25,2%)	38(34,2%)	0.139
Age, M $\pm$ SD	69,1 $\pm$ 12,9	70,0 $\pm$ 7,8	72,1 $\pm$ 8,9	0.418
Gender				
men	21 (46,7%)	10 (35,7%)	17(44,7%)	0.144
women	24 (53,3%)	18 (64,3%)	21(55,3%)	0.651
Mechanism of injury				
Street	13 (28,9%)	7 (25,0%)	14(36,8%)	0.282
Household	28 (62,2%)	17 (60,7%)	19(50,0%)	0.200
Road accidents	4 (8,9%)	3 (10,7%)	3 (7,9%)	0.905
Production	-	1 (3,6%)	2 (5,3%)	0.564

In the structure of injuries among elderly persons predominate hip fractures - 43%, followed by the patella injury, the third beam fractures in a typical place and rib fractures.

Analysis of the prevalence of injuries by season showed a predominance of the winter period compared to other seasons, the second most common trauma in the summer.

To analyze the effectiveness of trauma care provided to elderly and senile according casualty department of Shymkent city hospital emergency care, we conducted a comparative analysis of the treatment of patients treated with a variety of treatments in the years 2014-2016 (conservative methods, traditional operational, operational innovation methods).

In the trauma unit of Shymkent city hospital emergency care in 2014-2015 introduced the latest innovative methods of treatment of injuries, fractures of different locations, such as closed osteosynthesis of pelvic bones, screws, fixation of the blade fractures, closed osteosynthesis blocking extramedullaryplates for fractures of the leg bones, shoulder arthroscopy, arthroscopic surgery for pathology of Bancard, osteosynthesis of hip fractures, cannulated screws, without exposure and, under local anesthesia in elderly patients.

In 2014 and 2015 injuries in the elderly were treated mainly conservatively 73.3% and 82.1%, respectively, surgical treatment of the traditional methods used in 17.8% and 3.6% in 2014 and 2014 respectively. In 2016, in connection with the introduction of innovative methods significantly increased the proportion of patients treated by surgical weight innovative methods 42.1% in 2014 compared to 14.3% in 2013 and 8.9% in 2012 ( $\chi^2 = 18,532$ ,  $p = 0.001$ ).

Thus, the introduction into practice of traumatology Department of Shymkent city hospital of emergency medical care of modern methods of treatment of injuries in elderly and senile people allowed to improve the results of treatment, to increase the efficiency of trauma - logical care for the elderly and senile age.

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#### ҚАРТТАР МЕН ЕГДЕ ЖАСТАҒЫ НАУҚАСТАР АРАСЫНДАҒЫ ЖАРАҚАТТАР

**Түйін:** Соңғы онжылдықта демографиялық жағдай барлық дамыған едерде тұрғындар арасында егде және қарт адамдардың күрт есуі сипатталады.

Себебі жарақаттану қарттар арасында өзекті мәселелердің бірі болып отыр, қарттардың арасында ұйымдастыру алдын алу шараларын ұсыну мақсатында олардың арасындағы жарақаттың таралу себептерін талдау өзекті мәселені тудырады.

**Түйінді сөздер:** инновациялық емдеу әдістері, егде және қарт жасы, жарақат, травматологиялық көмек, емдеу тиімділігі

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#### ТРАВМАТИЗМ СРЕДИ ПАЦИЕНТОВ ПОЖИЛОГО И СТАРЧЕСКОГО ВОЗРАСТА

**Резюме:** За последние несколько десятилетий демографическая ситуация в мире характеризуется прогрессирующим увеличением численности пожилых и старческих людей в структуре населения практически всех развитых стран.

Поскольку травматизм является актуальной проблемой для пожилых, то возникает актуальная проблема в проведении анализа причин распространённости травматизма среди них с целью своевременного принятия организационных профилактических мероприятий.

**Ключевые слова:** инновационные методы лечения, пожилой и старческий возраст, травма, травматологическая помощь, эффективность