



Analysis of non-traumatic geriatric cases in Emergency Department

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ABSTRACT

Background: The rates of becoming ill and of attending hospitals are much higher in the geriatric ages. In this study we aimed to classify and to compare the initial diagnosis by the systems in non traumatic geriatric patients attend to the emergency service of a university hospital.

Method: Non traumatic patients aged 65 years or older, who attended the emergency service of the University Hospital in Sivas between the dates April 2001 and April 2002 were retrospectively predicted on the hospital records.

Results: Between the dates, a total of 11734 patients attended the emergency service and 2071(% 17.65) of them were in 65 years or older. The number of geriatric patients who attended the emergency service due to a non traumatic complaint was 1722. A percentage of 86.12 of 1722 patients attended due to a medical problem and a percentage of 5.05 of 1722 patients attended due to a surgical problem. The distribution of medical problems

according to the systems was as follows:

Diseases of the cardiovascular system 30.75 %; neurological diseases 22.86 %; diseases of the respiratory system 19.76 % and infectious diseases 9.17 %. The most frequent surgical problem was abdominal surgical problems (51.72 %). The percentage of 1.63 of the patients were diagnosed with unexplained coma. The percentage of 7.20 of the patients were attended due to several other problems, such as epistaxis, non specific abdominal or chest pain.

Conclusion: Given the high rates of hospital attendance, geriatric patients must be recognized as a group having priority in the health service policies and if it is possible, geriatric health centers must be established.

Keywords: Emergency room, non traumatic, geriatrics

Introduction

The concept of human health is the result of the

interaction of the genetic structure of a person with his environment. The age factor is one of the most important independent variables in all research regarding public health and epidemiologic evaluations ⁽¹⁾. The elderliness is defined as the decline in vigorous activities in a way resulting in death ⁽¹⁾. Due to the increased elderly population and their sickness in high percentages and bad health conditions of same, the considerable portion of the patients who attend emergency services consist of elderly individuals ⁽²⁾. When compared to young individuals, the elderly people attend the emergency services in threatening life situations or with urgent medical problems. The staying period of these people in emergency services is longer than younger patients and these people necessitate diagnostic tests and intervention more and frequently require hospitalization ⁽²⁾. The increase in elderly populations effects the distribution of health services and costs. The emergency services provide acute care with high technology, long term and primer health services which could be used for 24 hours ⁽³⁾. In this study, we aim to classify the reasons for admission and the diagnosis of non-traumatic geriatric patients who attend emergency services, systematically.

Material and Methods

A list of all non-traumatic patients older than 65 years old, who applied to Cumhuriyet University Medical School Emergency Medical Service between the dates of April 2001 to April 2002, is formed based on the patient record book. The reasons for admission of these patients to emergency services, the results of blood and other system analyses required for these patients and the information diagnosis and treatment regarding these patients are examined retrospectively and recorded thereafter. The illnesses observed in patients who were 65 years old and above were examined and evaluated with respect to frequency.

Results

The number of patients, who applied to Cumhuriyet University Medical School Emergency Medical Service between the years 2001 and 2002, was 11.734. Two thousand and seventy one (9.12%) of these patients were older than 65. While 349 (16.85%) of 2071 patients applied to emergency services due to trauma, the rest of the 1722 (83.15%) we admitted with non-traumatic reasons. Of these patients, 687 (39.89%) were female and 1035 (60.11%) were male. Of the 1722 patients, 1483 (86.12%) were admitted to emergency services due to internal reasons, 87 (5.05%) with surgical reasons, 28 (1.63%) with coma and 124 (7.20%) for other reasons (epistaxis, chest pain etiology, abdominal pain etiology). Among those admitted due to internal reasons, the number of patients admitted due to cardiovascular system

disorders was 456 (30.75%). Of these patients, 235 (51.54%) were admitted with acute coronary syndrome (176 myocardial infarction, 59 unstable angina pectoris), 111 (24.34%) with congestive heart failure, 54 (11.84%) arrhythmias (36 atrial fibrillation, 8 supraventricular tachycardia, 6 ventricular tachycardia, 4 atrio-ventricular complete block), 50 (10.96%) with hypertension, 6 (1.32%) with acute pulmonary edema.

The number of patients admitted with neurological disorders was 339 (22.86%). Of these patients, 273 (80.53%) admitted with cerebro-vascular disorders (infarct, hemorrhage), 29 (8.55%) with syncope etiology, 27 (7.97%) with vertigo etiology, 10 (2.95%) with seizures etiology. The number of patients admitted with respiratory system disorders was 293 (19.76%). Of these patients, 161 (54.95%) admitted with chronic obstructive pulmonary disease, 58 (19.80%) with dyspnoea etiology, 24 (8.19%) with asthma, 21 (7.17%) with hemoptysis etiology, 19 (6.48%) with lung cancer, 7 (2.39%) with cor pulmonale, 3 (1.02%) with pulmonary embolism. The number of patients admitted with infectious disease was 136 (9.17%). Of these patients, 45 (33.09%) had pneumonias, 34 (25%) with acute gastroenteritis, 22 (16.18%) with urinary tract infections, 20 (14.70%) with unknown fever, 8 (5.88%) upper respiratory system disease, 4 (2.94%) with cellulitis, 3 (2.21%) with meningitis. The number of patients admitted with gastrointestinal disorders was 125 (8.43%). Of these patients, 57 (45.6%) with gastrointestinal system bleeding, 47 (37.6%) with dyspepsia, 12 (9.6%) with hepatitis and 9 (7.2%) with gastrointestinal system malignancies. The number of patients admitted with hematological disorders were 23 (1.55%). Of these patients, 10 (43.48%) were with pancytopenia, 7 (30.43%) with bleeding disorders, 6 (26.09%) with anemias etiology. The number of patients admitted with renal disorders were 47 (3.17%). Of these patients, 35 (74.47%) with chronic renal failure, 12 (25.53%) with acute renal failure. The number of patients admitted with endocrine disorders was 46 (3.1 %). All of these patients had hypoglycemia. The number of patients admitted with intoxication was 18 (1.21%). Of these patients 7 (38.89%) were with food intoxication, 11 (61.11%) with drug intoxication.

Among surgical reasons, the number of patients admitted with abdominal surgical disorders was 45 (51.72%). Of these patients, 18 (40%) with cholecystitis, 18 (40%) with ileus, 7 (15.56%) with hernia (1 case with umbilical hernia, 6 case with inguinal hernia), 2 (4.44%) with acute pancreatitis. The number of patients admitted with cardiovascular surgical disorders was 16 (18.39%). Of these patients, 11 (68.75%) had deep venous thrombosis, 5 (31.25%) had acute arterial embolism. The number of patients admitted with urological disorders was 26 (29.89%). Of these patients 21 (80.77%) had benign prostate hyperplasia, 5 (19.23%) had prostate

cancer. The number of patients admitted with coma was 28 (1.63%). Of these patients, 12 (42.86%) had hypoglycemia, 6 (21.42%) had diabetic ketoacidosis, 4 (14.29%) had hepatic coma, 4 (14.29%) had uremic coma, 2 had (7.14%) coma etiology. The number of patients admitted for other reasons (50 with abdominal pain etiology, 44 with chest pain etiology and 30 with epistaxis) was 124 (7.20%).

Discussion

The morphologic and physiologic changes naturally occurring in the human body within the period from youth to elderliness affects many organ systems during this period. The most important problem faced in evaluation of old patients is the differentiation of signs, whether they are a normal change considering the age of the patient or symptoms of illness symptoms⁽⁴⁾. The elderly people admitted to emergency services and hospitals with insufficiency occurred in various systems more frequently. Furthermore, in this age group many diseases develop outside without classic symptoms and signs are due to changes arising due to elderliness⁽⁵⁾. In our study, most of the patients admitted to our emergency service were patients with internal complaints. Among this group, cardiovascular, neurologic, and respiratory diseases form the first three are the top three reasons for admission. Most of the patients admitted with non traumatic complaints were patients who have abdominal surgical problems. Metabolic reasons have the majority admitted priority applied due to coma. Therefore, the life period and quality can be raised by forwarding the geriatric patient group to related services by giving priority to these patients in emergency services. In the a study, it is determined that 28.5 % of all adults who admitted applied to the emergency service is composed of elderly people. It is also determined that a considerable ratio (61.6%) of these patients are male⁽⁶⁾. In our study, it is determined that 17.6% of the adult patients who applied to our emergency service is composed of patients who were 65 years old and older. It is determined that 60.11% of these people were male and 39.89% were female. In another study, it was determined that, heart insufficiency and incidence of cardiogenic shock happen more in patients who were 65 years old and older. Similarly, they determined that incidence of arrhythmias happens more in those patients when compared to younger patients. They determined that the death ratio due to heart insufficiency and the rhythm and conduction problems arisen during myocardial infarction were higher when compared to younger people⁽⁷⁾. Typical chest pain in 387 patients who were 65 years old and older and who admitted to the emergency service with myocardial infarction. They determined dyspnea in 20%, confusion in 8% and syncope in 7% of the patients⁽⁷⁻⁸⁾.

The patients who applied admitted to the emergency service with cardiovascular system diseases form 30.7% of the patients applied admitted with internal reasons. Of these patients, 51.55% applied admitted with acute coronary syndrome, 24.34% with congestive heart failure, 11.84 % with arrhythmias, 10.36% with hypertension and 1.31% with acute pulmonary edema. In the study of Marco *et. al*, upon examination of the diagnosis of 380 patients who applied admitted with geriatric abdominal pain, the following reasons are determined;

- i) infection in 15,7% of these patients,
- ii) mechanic obstructive disorders in 15,7%,
- iii) dyspepsia in 7,7%,
- iv) urological disorders in 7,7%,
- v) cancer in 7,2% and
- vi) other reasons(6).

The elderly people visit emergency services more frequently than younger patients. The staying period of elderly people in emergency services does extend, the number of diagnostic tests do increase due to the atypical form of the symptoms and signs of their illnesses, their usage of medicine and the existence of their other concomitant diseases which may affect the illness they complain about present with. Therefore, the elderly patients who applied are admitted to emergency services should be treated more carefully and the symptoms which are seen as unimportant should be considered and evaluated carefully.

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