Original Article

A Profile of Elderly Patients Seeking Emergency Care

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Abstract

Background: Elderly patients have many co-morbid diseases and age-related changes which make them more vulnerable to acute and chronic diseases. Acute diseases are amenable to treatment hence it is of importance to know what is the profile of elderly people who come to an emergency facility.

Methods: A list of all elderly patients presenting to the emergency ward of a tertiary care teaching hospital in southern India over one month period, was obtained by pursuing a computerized list of admissions. The following data was extracted from the records : age, sex, presenting symptoms, underlying diseases, provisional diagnosis, whether admitted to the ward or discharged, and outcome at the end of one week.

Results: Of the 203 patients studied, 70% were males. The patients formed 8.7% of all attendees. Breathlessness was the most common presenting symptom. Seventy-five percent of patients had one to four co-morbid diseases. Diabetes and hypertension were the commonest co-morbidities. Infections and cardiovascular diseases were the most common diagnosis. Thirty-four percent of patients were admitted to the hospital wards. At the end of one week, only 50% of patients could be traced, and of these, 0.6% had died.

Conclusion: Elderly form 8.7% of admissions to emergency care, and males are the more frequent visitors. Infections and cardiovascular diseases are the most common causes of illness. Seventy-five point nine percent of patients have underlying co-morbidities.

(Journal of The Indian Academy of Geriatrics, 2005; 1 : 7-9)

Introduction

The elderly present a formidable challenge to the health-care team, because their illnesses rarely allow a straightforward reductionist type of analysis. They are well known to suffer from multiple chronic problems[1] such as diabetes and hypertension. The ageing process causes a variable decline in function in a variety of organ systems, thus making elderly persons of the same chronological age different from each other.

Besides this, the additional negative impact of chronic substance-abuse (principally smoking and alcohol intake), lack of physical activity, and adverse socioeconomic factors, makes the elderly person a repository of poor health parameters. It is therefore not surprising that they are more vulnerable to chronic illnesses and also to acute sudden deterioration of health, as compared to younger people. Acute illnesses, unlike chronic problems, are amenable to therapy, but only if they are recognized early.

The ability to recognize the presence of an acute illness in an elderly person requires special expertise because disease presentation is often bizarre and confusing. Having identified an acute illness, the task is to determine not only the presence of co-morbid diseases, but also the impact of each on the present acute problem (stroke, myocardial infarction), and finally, the impact on the functional status of the person which requires experience and training.

The above factors make it difficult to care for the acutely ill older person. The difficulty is made worse by the paucity of data on acute illness in the elderly in the Indian context. We therefore decided to collect preliminary data from the emergency services of this hospital which is a tertiary care teaching hospital in a small town in southern India.

The aim of the study was to ascertain the numbers, presenting symptoms, common underlying co-morbidities, and short-term outcome of persons a 60 years of age and above who present to the emergency department.

Material and methods

A retrospective search of the charts of all patients was performed, who were seen in the emergency service of Christian Medical College Hospital for a period of one month (July 2003). The study subjects were identified by pursuing a computer generated list of the previous days admissions into the emergency care. All patients aged 60 years & above were included in the study, and the following characteristics were extracted from their hospital charts.

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Age, sex, chief complaints, known co-morbid diseases as reported by the patient or relatives, and the principal provisional diagnosis made by the admitting physician after an initial physical examination, and preliminary tests were noted. The details of whether the patient was discharged from the emergency ward, or admitted to a hospital ward was noted. The patients were then tracked by reviewing their charts to note whether they were alive or dead at one week after their initial consultation.

Results

A total of 277 patients a 60 years of age & above were seen in the emergency services between 1/7/2003, and 31/7/2003. During this time, the total number of admissions of all ages was 2412 , thus making elderly patients 8.7% of attendees. The total number of charts available for study was 203, amounting to a loss of 26.7% of patients.

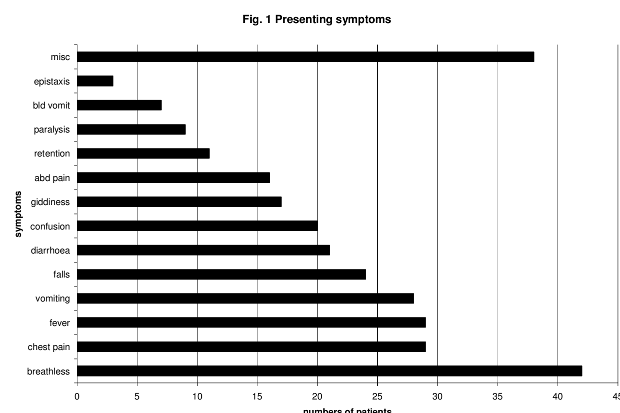
The demographic details of patients is shown in Table 1.

Table 1 : Age and Sex of 60 years & above old patients attending emergency ward July 2003

Age	Sex		Total
	Male	Female	
60 to 69 years	77	44	121
70 to 79 years	49	11	60
80 years &above	13	9	22
Total	139 (68.5%)	64(31.5%)	203

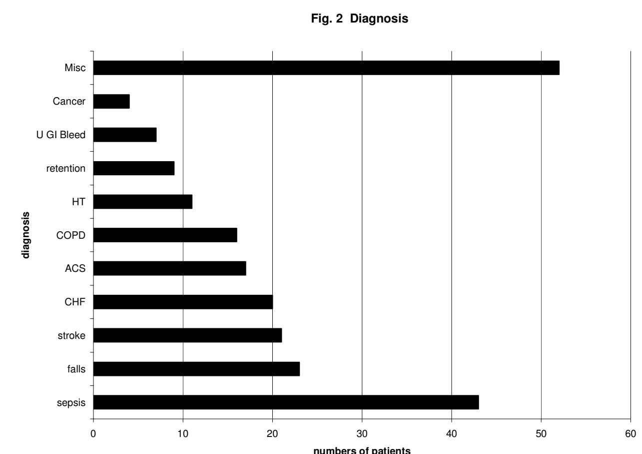
The presenting symptoms recorded by the casualty medical officer, are depicted in Fig. 1. The provisional diagnosis arrived at by the emergency physician at the end of the initial examination, and for which treatment was started, is shown in Fig. 2.

Fig. 1 Presenting symptoms



Infections was the most common diagnosis. Gastrointestinal infection was the most frequent (13 patients), followed by urinary tract, skin and subcutaneous infections which were 9 each. Pneumonia was diagnosed in 4 patients and 3 were unclassified. One patient each had meningitis, malaria, tuberculosis and otitis externa.

Fig. 2 Diagnosis



The co-morbid diseases which were already known to be present in the patients were as follows as shown in Table 2.

Table 2: Prevalent co-morbid diseases in patients in the emergency services, July 2003

Diseases	Number of patients (N=203)	%
Diabetes	77	37.9
Hypertension	74	36.4
Ischaemic heart disease	31	15.2
COPD	27	13.3
Cancer	11	5.3
Stroke	7	3.4
Alcoholism	7	3.4
BPH	5	2.4
Psychiatric illnesses	5	2.4
Miscellaneous	57	28.0

There were 49 patients (24.1%) who reported no preexisting disease. Of the remaining, 76 patients (37.4%) had 1 co-morbidity, 38 patients (18.7%) had 2, 23 patients (11.3%) had 3 and 17 (8.3%) had 4 co-morbidities. Thus, 75.9% of patients had one to four comorbid conditions.

Seventy-one patients (34.9%) were admitted to the hospital wards, and 132 (65.1%) patients were discharged.

The outcome at 1 week could be ascertained in 113 patients only, i.e. about 55.7% of the total number studied. Of these, 13 had died (11.5%), whereas 100 (88.5%) were found to be alive.

Discussion

In this study the elderly comprise 8.7% of all

emergency admissions, correlating closely to the 7% prevalence of the over 60 years age group in the general population. Some data from developed countries show a much higher emergency care utilization by the elderly, where emergency admissions versus general population prevalence of the elderly have been reported as 16% vs 13%[2], 18% vs 5%[3], 21% vs 15%[4] and 19% vs 15%[5]. The relatively low figure in this study may reflect the fact that the majority of the elderly in India are in the "young-old category" (60 – 75 years). One can expect an increase in emergencies in the elderly when the demographic profile leans towards a greater proportion of the "old-old", in the population at large. It is also possible that many older persons are unable to access care due to poverty or neglect. It is also noteworthy that the sex ratio is in favour of males (68.5 % males). This could be a reflection of the gender inequality in our society, or it may reflect better health in women who survive to this age. It is well known that women generally outlive men.

The high prevalence of underlying diabetes, hypertension, ischemic heart disease and COPD, underscores the vulnerability of patients with these diseases to develop acute illnesses requiring emergency care.

The data reveals that infections comprise the single most common diagnosis as the cause for acute illness. This may be due to the high prevalence of diabetes. The importance of early institution (but not indiscriminate) of antibiotic therapy when an elderly person presents with acute illness is desired. It is possible that there were more infections than actually diagnosed, because the elderly are known for not manifesting classical signs of fever. There is a need to study the exact prevalence of infections, as well as the earliest indicators of an infection in the elderly person.

Cardiovascular related morbidity formed a major reason for admission. Both heart failure and acute coronary syndrome, if taken as one entity (20+ 17= 37), would rank as the second highest diagnosis. This is similar to most studies.[1,6]

It is noteworthy that the charts made no mention of mental status examination. Altered sensorium due to delirium is the hallmark of an acutely ill older person. Detection of delirium is crucial because the outcome of the acute illness can be adversely affected by its presence. This reflects the general lack of awareness amongst emergency care personnel about the importance of delirium and dementia in the elderly. It may also be a reflection of the lack of time in a busy emergency service to attend to these details at the time of first contact.

A significant observation is that falls and trauma, though present as the fifth ranking symptom at admission was rated as the second ranking provisional diagnosis, but the absolute numbers are almost the same at 23 and 24. This change in ranking is probably due to the fact that the higher ranked symptoms of chest pain, fever, vomiting were arising from a variety of unrelated causes.

Conclusion

The prevalence of elderly admissions to the emergency service is closely related to the proportion of elderly in the community. Seventy-five point nine percent of the elderly have one to four co-morbidities, of which diabetes and hypertension form the major factors.

Breathlessness was the most common presenting symptom and the most common provisional diagnosis were infections, cardiovascular diseases and injuries. Two-thirds of patients were discharged from the emergency ward and almost half the patients were known to be alive at the end of the first week.

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