

To Study the Clinical Profile of Geriatric Population Presenting to Emergency Department

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Abstract: *Background:* Aging is nature ordained, inevitable phenomenon. As the life expectancy goes up, it brings in new challenges and dimensions especially in the developing country like India. So the present study is aim to find out the urgency required in geriatric care and treatment and common diseases affect among them. *Objective:* To study the clinical profile of geriatric population presenting to emergency department. *Methods* In this study 200 patients aged 65 years or more presenting to the department of emergency medicine in AIMS were taken during a time period of six months. *Result:* Out of 200 patients, 67% was males and 34% were females. As per triage score 89(44%) patients was on red category, 101(51%) was on yellow category and only 10(5%) was on green category. In my study geriatric population were commonly affected with respiratory problems in which the acute exacerbation of COPD was the most common cause with 29%, followed by cardiovascular problems with 22.5% and gastrointestinal problems with 11.5%. *Conclusion:* This study concludes that most of the geriatric age group people presenting to the emergency department needs immediate attention and care. Also respiratory infections are more common in geriatric age group in the present study. Infective exacerbation in the background of structural lung disease and poor immunity due to old age were the most important pathology detected.

Keywords: Geriatric population, emergency department, respiratory infections

1. Introduction

Now the most rapidly increasing population group among worldwide is the geriatric age group. A century ago, among 100 group of people only 20% was in the geriatric age group and now it has been come to 50%. According to 2011 census geriatric persons in India is about 8.2% of the population. The population of elderly in India is expected to increase to 173 million by 2026 {2}. The challenge ahead for the health care in coming years is to ensure the quality of life to a large group of geriatric population. However, to address the health care needs of this growing numbers of vulnerable heterogeneous population, reliable data about their health problems from different social settings are still lacking in India (4).

The present study was conducted to recognize the need for reliable data on health problems in elderly and to find out whether they require emergency care or not.

2. Methodology

Type of study

The study was a prospective study, which consisted of geriatric population presenting to emergency medicine department of amrita institute of medical sciences.

Study place

Emergency medicine department of amrita institute of medical science, Kochi, Kerala.

Sample size

This is a study with population of 200 geriatric patients presenting to emergency department during July 2017 to December 2017

3. Materials and Methods

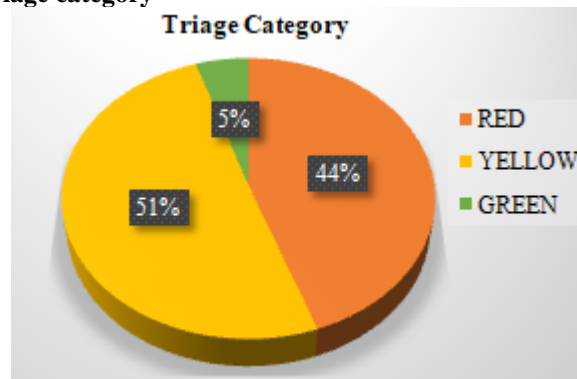
The study includes 200 patients aged 65 years and above presenting to the emergency department during a time period of six months- from August 2017 to January 2018

The parameters selected for this study are: the gender, age, heart rate, blood pressure, oxygen saturation, blood glucose level and the temperature. Laboratory testing included hemogram, serum electrolytes, liver function test, renal function test and urinalysis. Imaging such as ultrasonography, x ray, computed tomography and magnetic resonance imaging were also taken for the confirmation of the diagnostic purpose. 12 lead electrocardiogram, two dimensional echocardiography and gastro intestinal endoscopy were done whenever indicate

4. Results

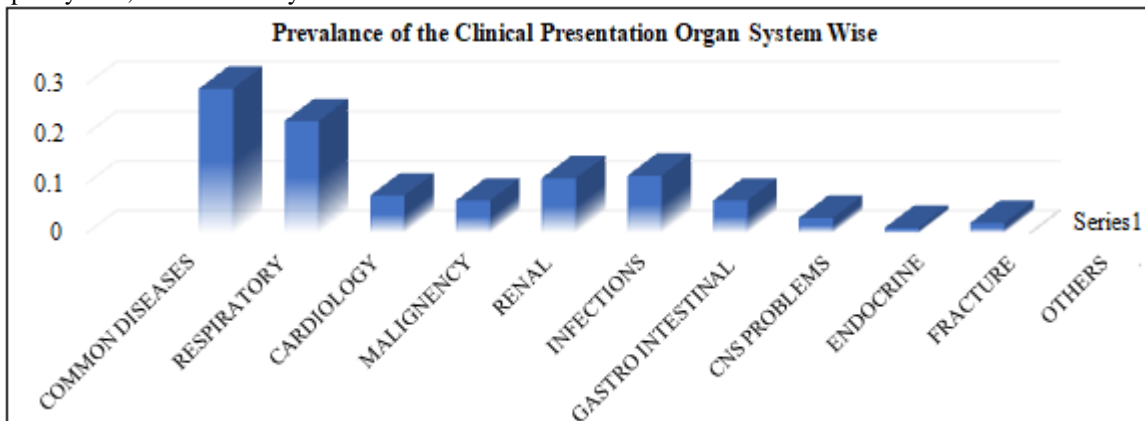
- Gender distribution:** Out of 200 patients 63% patients were males and 37% were females
- Age distribution:** Clinical profile of 200 patients shows that 96% patients were in the age group of 65-85 years and 4% were in the age group of 86- 100 years.
- Heart rate distribution:** Out of 200 patients ,73% patients had normal heart rate ,47% had tachycardia and 4% had bradycardia
- Blood pressure distribution:** Out of 200 patients 25% had normal blood pressure, 51% were hypertensive and 24% were hypotensive

Triage category

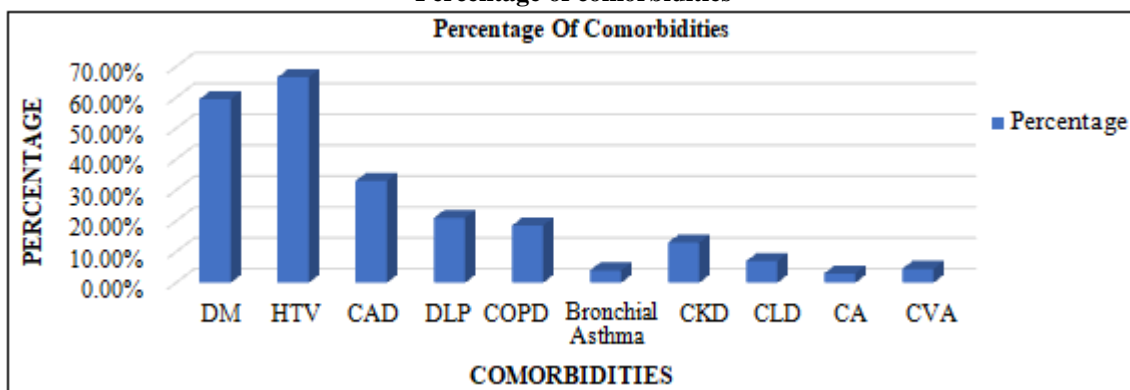


Prevalence of the clinical presentation organ system wise

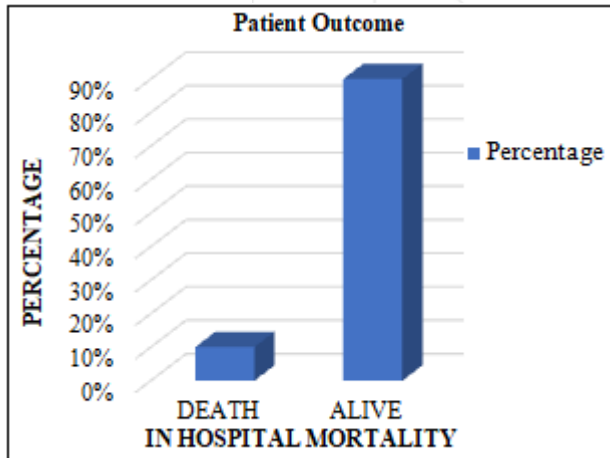
*Others: spondylosis, iron deficiency anemia and cataract.



Percentage of comorbidities



Patient outcome



patients were in the age group of 65-85 years (96%) and (4%) in the age group of 85-100 years.

- According to the triage system out of 200 patients 89(44%) patients, were on red category, 101(51%) were on yellow category and only 10(5%) were on green category.
- In this study respiratory diseases were the most frequent chronic disease seen in 58 patients'. In that acute exacerbation of COPD found to be the common problem in 37 patients (63.79%). Other main causes include acute exacerbation of bronchial asthma in 6 (10%), acute pulmonary edema in 4 (7%), and bronchiectasis in 5 (8.68%)
- Cardiovascular problems are shown as the second most complaint among geriatric population in 45 patients'. Acute coronary syndrome is common among cardiovascular problems in 14 patients' (31%), followed by heart failure in 13 patients' (28%), systemic hypertension in 8 (17%), stable chronic angina in 7(15%) and arrhythmias in 3(6%). common arrhythmias seen are ventricular tachycardia and atrial fibrillation.
- Infections and malignancy is followed by the gastro intestinal diseases in which the pneumonia in 8 patients' (36%) and urinary tract infection in 6 patients' (28%) are predominant and malignancy of lung in 6 patients out of 15 (40%) remains common. Major Gastro intestinal diseases include hepatic encephalopathy and upper GI bleed. In renal and CNS problems out of 13, CKD in 10 patients' (76.92%), acute kidney injury in 2 patients' (15.3%) and in CNS common disorder is cerebrovascular

5. Discussion

- The number of older persons in developing countries has increased rapidly in recent years. Among the elderly, chronic diseases are the main contributors to the burden of diseases as in all case with the developing countries. While geriatric health services have undergone great advancements in developed countries on the past few decades these services are lagging in India. This has resulted in a paucity of epidemiological data on aging and associated burden of disease
- The clinical profile of the 200 patients 63% were males and 37% were females in the study. Of which most

- accident in 4 patients' (30%) and metabolic encephalopathy in 2 patients (15%) are seen.
- Endocrine problems are very less of total 6 patients in that hyperglycemia and diabetic neuropathy were common. Musculoskeletal system injuries only found in 2(1%)patient's out of 200. Others include spondylosis, cataract and iron deficiency anemia. (1.5%)
 - Hyponatremia in 21 (10%) and hypokalemia in 22(11%) is common among geriatric patient's. In which severe hyponatremia in 8 patients' (4%). Hypernatremia in 2(1%)and hyperkalemia in 15(7%) out of 200 patients
 - The patient outcome was 90% alive and 20% died in the in hospital setting. Death were common in people with last stage of carcinoma, severe sepsis and chronic pleural effusion.

6. Conclusion

According to the triage score most of the patients were included in the red 89(44%) and yellow 101(51%) categories and only a few were in the green 10(5%). This gives us the impression that most of the geriatric population presenting to emergency department requires immediate medical care. Non-urgent geriatric cases are rarely seen. This study also shows that respiratory problems are common in this age group followed by cardiovascular and gastrointestinal diseases. The diseases seem to be more prevalent among males than females. The major electrolyte abnormalities seen were hyponatremia and hypokalemia. The main comorbidities among geriatric population include systemic hypertension and diabetic mellitus, followed by coronary artery diseases. So I conclude that most of the geriatric age group (> 65 years) presenting to emergency department requires immediate attention and care. They need proper evaluation and management according to their clinical presentation. They have unique risk, considerations and needs that must be addressed properly in order to realize the greatest potential impact of a single emergency care visit.

References

- [1] Outman JM, Velkoff VA, Hogan H: An aging nation: the older population in the United States.
- [2] World Health Organization: Definition of an older or elderly person.
- [3] Pollock RD, Carter S, Velloso CP, et al: An investigation into the relationship between age and physiological function in highly active old
- [4] American Geriatrics Society 2015 Beers Criteria Update Expert Panel: American Geriatrics S1. Pew Research Center: Baby boomers retire.
- [5] West LA, Cole S, Good kind D, et al: 65+ in the United States: 2010.
- [6] Centers for Disease Control and Prevention: The state of aging and health in America 2013, Atlanta, 2013, Centers for Disease Control and Prevention
- [7] Pines JM, Mullins PM, Cooper National trends in emergency department use, care patterns, and quality of care of older adults in the United States. J Am Geriatric Soc 61:12-17, 2013.
- [8] Samaras N, Chevalley T, Samaras D, et al: Older patients in the emergency department: a review. Ann Emerg Med 56:261-269, 2010.
- [9] American College of Emergency Physicians; American Geriatrics Society; Emergency Nurses Association; Society for Academic Emergency Medicine; Geriatric Emergency Department Guidelines Task Force: Geriatric emergency department guidelines. Ann Emerg Med 63: e7-e25, 2014.
- [10] Han JH, Bryce SN, Ely EW, et al: The effect of cognitive impairment on the accuracy of the presenting complaint and discharge instruction comprehension in older emergency department patients. Ann Emerg Med 57:662-671.e2, 2011.