

**Disease Profile and Outcome of Geriatric Patients Admitted in a Tertiary Care Hospital, Tirupati, A.P.**M. Ramadevi MD<sup>1</sup>, C. Jaya Bhaskar MD<sup>2</sup>, Y. Divya Latha<sup>3</sup><sup>1</sup>Associate professor of General Medicine, ACSR Government Medical College Nellore<sup>2</sup>Rtd. Professor, Department of General Medicine, S.V Medical College, Tirupati, AP<sup>3</sup>Ex Senior Resident of General medicine, S.V Medical College, Tirupati, AP

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**Abstract:**

Ageing is a progressive and generalised impairment of body functions and loss of adaptive responses to stress and increasing risk of age related diseases. Non communicable diseases like hypertension, diabetes, musculoskeletal disorders, refractive errors and their complications are increasing among the ageing population.

**Data collection and Results:** Total admissions during the study period in the Department of General Medicine were 4184. Of these 1657 (39.6%) were in the age group of 60years or more. Among them 610 were admitted in Acute medical care unit, 232 were in cardiology unit and 815 patients were admitted in the medical wards. 1060 (64%) are male subjects and 597(36%) are female subjects with male to female ratio of 1.8 :1. Common diseases observed are CVA,CKD,CAD, Respiratory diseases, Sepsis and dyselectrolytemia.

**Keywords:** Geriatric, CVA,CKD,CAD.

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**Introduction**

People more than 60years are considered elderly. Ageing is a progressive and generalised impairment of body functions and loss of adaptive responses to stress and increasing risk of age related diseases. Increase in the proportion of elderly population is due to low birth rates coupled with long life expectancies.

As against 5.6% in 1961, the proportion goes up to 7.4% in 2001. For males the rise was more modest from 5.5% to 7.1%, while for females there had been a steep rise from 5.8% to 7.8% during the five decadal Censuses from 1961 to 2001. On account of better education, health facilities and increase in life expectancy, the percentage of elderly population (>60) has gone up from 5.3 and 5.7 percent to 6.0 and 8.0 percent respectively in males and females during 1991 to 2011 [1-2].

At least 50% of this population in India have chronic diseases. Non communicable diseases like hypertension, diabetes, musculoskeletal disorders, refractive errors and their complications are increasing among the ageing population [3-4].

**Objectives:** To study the disease profile and outcome of geriatric patients admitted in the Department of General Medicine in SV Medical College, SVRRGGH, Tirupati, AP

**Patients and Methods:**

It is a hospital based retrospective study, of geriatric age group (more than 60years) admitted in the Department of General Medicine, in SVRR Government General hospital, Tirupati, Andhra Pradesh, INDIA from 1<sup>st</sup> January 2016 to 31<sup>th</sup> August, 2016. Data is collected from the medical records and the results are analysed.

**Results**

Total admissions during the study period in the Department of General Medicine were 4184. Of these 1657 (39.6%) were in the age group of 60years or more. Among them 610 were admitted in Acute medical care unit, 232 were in cardiology unit and 815 patients were admitted in the medical wards.

1060 (64%) are male subjects and 597(36%) are female subjects with male to female ratio of 1.8 :1 . Most common age group affected in this study is 60-65 years constitute 41.3% of total subjects followed by 66-70 years in both male and females . Less number of patients are observed in the age group of more than 80 years. While the age progresses female subjects are more common than male subjects.

**Table 1: Age And Sex Distribution**

S.No	Age(years)	Male	Female	Total
1	60- 65	420	265	685
2	66-70	389	98	487
3	71-75	151	104	255
4	76-80	58	74	132
5	>80	42	56	98
6	Total	1060	7	

Most common disease seen in the present study is cerebro vascular accidents followed chronic kidney diseases and respiratory diseases in 579(35%), 348(21%) and 256(15.4%) respectively in both sex. Least common disease is alcohol intoxication and poisonings. Most common cause for cerebrovascular accident is Hypertension. Ischemic

stroke is most commonly observed than hemorrhagic stroke in the study subjects in both sex. Most common cause for Chronic kidney disease is Diabetes followed by analgesic abuse. Most common respiratory disease is Chronic obstructive pulmonary diseases in male and Infections in female.

**Table 2: Disease Profile**

S.No	Disease	Male	Female	Total
1	Cerebrovascular accidents with HTN	317	262	579(35%)
2	CKD	253	95	348(21%)
3	Respiratory diseases	190	66	256(15.4%)
4	Cardiac diseases	133	99	232(14%)
5	Sepsis with AKI	53	18	71(4.3%)
6	Dyselectrolytemia	39	11	50(3%)
7	Hyperglycemia and Ketosis	29	17	46(2.8%)
8	Alcohol intoxication and poisoning	24	12	36(2.2%)
9	Miscellaneous	22	17	39(2.3%)

**Table 3: Type of stroke**

S. No.	Types of CVA	Males	Females
1	Haemorrhage	132	99
2	Infraact	179	162
3	ICSOL	6	1

Infarct is more common than haemorrhage.

Commonest age group affected by CVA is between 60-65 yrs in both genders.

**Table 4: Pattern of Disease in relation with age and gender:**

S.No	Age	CVA		CKD		Resp. disease		CAD		AKI		Hyper glycemia		Dyselectro Lytemia	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F
1	60-65	134	128	148	47	27	12	54	38	28	9	7	12	11	6
2	66-70	98	36	63	24	104	13	65	17	22	4	12	1	15	1
3	71-75	56	42	31	13	29	26	6	17	1	2	6	1	8	0
4	76-80	18	32	4	7	16	14	2	13	0	3	8	3	2	2
5	>80	11	24	6	4	14	01	6	15	2	0	0	0	3	2
6	Total	317	262	253	95	190	66	133	99	53	18	39	17	39	11

CVA is more common in 60-65 year age group.

**A. Mortality in relation with age and sex:** Mortality was higher among males(14.9%) compared to females(9.5%) with a total mortality rate of 12.9% with in geriatric population. Highest mortality is observed in the age group of more than 80 years (48.97%)

**Table 5: Outcome**

S. No.	age	No. of cases	Deaths
1	60-65	687	68
2	66-70	487	32
3	71-75	255	27
4	76-80	132	31
5	>80	98	48

**B. Mortality in relation with disease.**

17.6% of cerebrovascular accidents are not recovered. 11.2% of mortality is observed in chronic kidney disease and 9.9% in cardiac diseases.

Commonest cause for death is CVA but mortality rate is high in patients with sepsis and infection (27%). Those patients with dyselectrolytemia and hyperglycaemia with ketosis are recovered. Other patients with chronic diseases are treated and discharged with good general condition.

**Table 6:**

S.No	Disease	No. of cases	No. of death
1	CVA	579	102
2	CKD	348	39
3	Cardiac diseases	232	23
4	Sepsis	71	58

**Discussion**

In our study 1657 geriatric patients were admitted during the study period in the Department of General Medicine.

1060 (64%) are male subjects and 597(36%) are female subjects with male to female ratio of 1.8 :1. Most common age group affected in this study is 60-65 years constitute 41.3% of total subjects. The purpose of the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) is to provide an evidence-based approach to the prevention and management of hypertension. The key messages of this report are: in those older than age 50, systolic blood pressure (SBP) of >140 mmHg is a more important cardiovascular disease (CVD) risk factor than diastolic BP (DBP); beginning at 115/75 mmHg, CVD risk doubles for each increment of 20/10 mmHg; those who are normotensive at 55 years of age will have a 90 percent lifetime risk of developing hypertension; prehypertensive individuals (SBP 120–139 mmHg or DBP 80–89 mmHg) require health-promoting lifestyle modifications to prevent the progressive rise in blood pressure and CVD [5]. There is limited data available on disease profile in the geriatric population regarding hospital admissions.

According to SVosylius et al [6] 49% ICU admission are due to neurological diseases, 41.5% are due to cardiac diseases. According to K.Sodhi, M.K. Singla et al [7] 24.6% are due to medical causes, 15.8% are due to renal causes, 6.3% are due to neurological causes, 5.14% are due to cardiac causes, 7.64% are due to pulmonary causes. According to Srinivas PJ et al [8] and Vandana Nikumb et al [9] females were more (68.8%) compared to males (31.3%) and majority of elderly

were in age group of 60-69 years. In our study most common cause of admission was cerebrovascular disease secondary to uncontrolled hypertension (35%), followed by chronic kidney disease and congestive cardiac failure. Least common causes are poisoning and alcohol intoxication.

In our study most of deaths occurred in patients aged > 80 years and most of the deaths (85%) occurred in acute medical care unit. In our study male > female admissions with a ratio of 1.8:1. According to Srinivas PJ et al.[8] and Vandana Nikumb et al[9], females were more (68.8%) compared to males (31.3%) and majority of elderly were in age group of 60-69 years & highest load of morbidity was found in >75 years population (100%).

In our study mortality among the geriatric admissions was approximately 13%, of which mortality due to sepsis and infections was 23%. A study done by Castillo et al[8], showed mortality is varying from 22% to 31%, difference is due to severity of the illness.

**Limitations of the study**

It is a retrospective study conducted in the department of medicine of a single institute. Admissions in the other departments is not considered, so actual disease burden cannot be calculated.

**Conclusion**

The present study thus clearly shows that elderly population has got specific needs related to medical aspect. Regular screening and health check-ups to decrease morbidity should be promoted. As there is a rapid expansion in number of elderly population, there is a need to improve geriatric health care

services in the developing countries like India and provide training to health care providers.

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