

CARDIOVASCULAR MORBIDITY PROFILE OF POPULATION AGED 60 YEARS AND ABOVE IN RURAL AND URBAN AREAS OF KANPUR

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ABSTRACT:

Background: Cardiovascular morbidity is a major contributor towards old age health problems which requires specialized care and if left unattended can deteriorate the quality of life and also lead to mortality. Therefore a study was planned to find out the prevalence of cardiovascular morbidity among geriatric population living in rural and urban areas of Kanpur.

Objective: To find out the prevalence of cardiovascular morbidity in geriatric population in rural and urban area of Kanpur and also to study the pattern of cardiovascular morbidity in two areas.

Material and methods: a cross sectional study was carried out in a randomly selected rural and urban area of Kanpur. 443 geriatrics in rural and 401 in urban area were interviewed and physically examined.

Results: Geriatrics constituted 8.2% and 7.7% of total population in rural and urban area respectively. Majority of population in both areas belonged to 60-70 years age group i.e. 78.8% and 75.8% respectively. 12.2% of rural geriatric and 12.5% of urban geriatric were suffering from some or other kind of cardiovascular morbidity. In rural area 39.1% of geriatric population is hypertensive while in urban area hypertension is prevalent in 41.6% of geriatric population. 98.1% of morbid in rural and 86.0% in urban area were not doing any kind of exercise. A majority of population suffering from cardiovascular morbidity were not smoking currently. Majority i.e. 72.2% of geriatric population suffering from cardiovascular morbidity in rural area were having BMI between 18.5-24.99 while in urban area 57.4% of them were having BMI >=25. Hypertensives constituted 57.4% in rural and 66.0% in urban area towards those who are suffering from cardiovascular morbidity.

Introduction:

The UN defines a country as aging where the proportion of people over 60 years reaches 7%. In 2000 India had 7.7% aged and proportion is expected to reach 12.6% in 2025. The Indian geriatric population is currently the largest in world. The population of geriatrics in India has grown from 5.4% in 1951 to 6.4% in 1981 & to 7.7% in 2001. Population aging is the most significant result of the process known as demographic transition and nations are gradually aging. This means need to expand health services to inculcate geriatric medicine. Geriatric population apart from risk to suffer from common diseases are prone to develop age related problems, like musculoskeletal problems, diminished vision, coronary heart diseases, psychiatric problems, benign prostatic hyperplasia, reduced nutrition and neglect from younger section of community.

Cardiovascular morbidity is a group of disorders which includes IHD, hypertension, stroke, congestive heart failure etc. cardiovascular morbidity reflects age related degenerative phenomenon as well as consequence of previous exposure to risk factors such as inappropriate nutrition, physical inactivity, tobacco and alcohol consumption, Cardiovascular morbidity seriously impairs quality of life and requires specialized health services. About 18.0% of persons aged above 60 years suffer from some or other kind of

cardiovascular morbidity. VAHI (1997), report of the independent commission on health in India, chapter 14, health problems of specialized groups.

Material and Methods:

Study Population and study design in the present study persons aged 60 years and above were taken as study population from rural and urban area of Kanpur, **Sample Size** minimum sample size for the present study, taking expected prevalence of morbidity in geriatric population as 52% (NSSO 1998, ² CENSUS 2001) was calculated as $n=383.54$ rounded off to 400 each in rural and urban area, **Sampling technique multistage simple random sampling technique** was applied to selected 400 cases each from rural and urban areas, **Study Design** cross sectional, **study tool** the information collected from participants was recorded on a predesigned and proportions, **Inclusion criteria** the person who was diagnosed by a medical practitioner as suffering from cardiovascular morbidity (medical records with the patient were used for this purpose) and is currently on treatment or in last one year. The patient was physical examined along with proper history and blood pressure examination. Since hypertension is an independent risk factor for cardiovascular morbidity it was not included in cardiovascular morbidity.

Results :

Table 1
AGE AND SEX WISE DISTRIBUTION OF STUDY POPULATION

Age(yrs)	Rural		Total	Urban		Total
	Male	Female		Male	Female	
60-70	174(49.9)	175(50.1)	349(78.8)	178(58.6)	126(41.4)	304(75.8)
70-80	(50.0)	30(50.0)	60(13.5)	27(47.4)	30(52.6)	57(14.2)
80-90	11(34.4)	21(65.6)	32(7.2)	22(56.4)	17(43.6)	39(9.7)
>90	2(100.0)	0(0)	2(0.4)	1(100.0)	0(0)	1(0.3)
Total	217(48.9)	226(51.1)	443(100)	228(56.9)	172(43.1)	401(100)

Geriatrics constituted 8.2% and 7.7% of total population in rural and urban area respectively. In rural area males constituted 48.9%, which females constituted 51.1% of total geriatric population. The respective figures for urban area are 56.9% and 43.1%. Majority of population in both areas belonged to 60-70 years age group i.e. 78.8% and 75.8% respectively.

Table 2
DISTRIBUTION OF CARDIOVASCULAR MORBIDITY IN RURAL AND URBAN AREA

Cardiovascular morbidity	Rural	Urban
Present	54(12.2)	50(12.5)
Absent	389(87.8)	351(87.5)
Total	443(100)	401(100)

12.2% of rural geriatric and 12.5% of urban geriatric were suffering from some or other kind of cardiovascular morbidity.

Table 3
CARDIOVASCULAR MORBIDITY PROFILE IN RURAL AND URBAN AREA

Cardiovascular morbidity*	Rural (n=54)	Urban (n=50)
Coronary artery disease	24(44.4)	30(60.0)
Congestive heart failure	20(37.0)	17(34.0)
Previous MI	11(20.4)	21(42.0)
Stroke	6(11.1)	6(12.0)
Others#	9(16.7)	8(16.0)

*Based on multiple responses, #includes aneurysms, gangrene, intestinal ischemia etc

Coronary artery disease contributed 44.4% and 60.0% towards cardiovascular morbidity in rural and urban area respectively. In urban area previous episode of MI contributed 42.0% towards cardiovascular morbidity.

Table 4
BLOOD PRESSURE DISTRIBUTION IN RURAL AND URBAN AREA

Blood Pressure*	Rural	Urban
Normal	91(20.5)	46(11.5)
Prehypertension	179(40.4)	188(46.9)
Stage I	130(29.4)	108(26.9)
Stage II	43(9.7)	59(14.7)
Total	443(100)	401(100)

*Joint national committee criteria VII

In rural area 39.1% of geriatric population is hypertensive (stage I + Stage II) while in urban area hypertension is prevalent in 41.6% (Table 4) of geriatric population.

Table 5
DISTRIBUTION OF CARDIOVASCULAR MORBIDITY IN RELATION TO SOME RISK FACTORS
IN RURAL AREA

Risk Factor	Status	Cardiovascular morbidity		Total (N=443)
		Present (n=54)	Absent (389)	
Exercise	No	53(98.2)	381(97.9)	434(97.9)
	Yes	1(1.8)	8(2.19)	9(2.1)
Smoking	No	35(64.8)	249(64.0)	284(64.1)
	Yes	19(35.2)	40(36.0)	159(35.9)
Alcohol	No	50(92.6)	354(91.0)	404(91.2)
	Yes	4(7.4)	35(9.0)	39(8.8)
BMI	<18.5	14(25.9)	66(17.0)	80(18.1)
	18.5-24.99	39(72.2)	305(78.4)	344(77.7)
	>25	1(1.9)	18(4.6)	19(4.3)
Hypertension	Normal	10(18.5)	81(20.8)	91(20.5)
	Prehypertension	13(24.1)	166(42.7)	179(40.4)
	Stage I	16(29.6)	114(29.3)	130(29.3)
	Stage II	15(27.8)	28(7.2)	43(9.7)

Only 2.1% of rural population was involved in any form of exercise. About 36% of population is smoking and among those who were having cardiovascular morbidity 35.2% were smoking. 57.8% of morbid population was either stage I and stage II hypertensive.

Table 6
DISTRIBUTION OF CARDIOVASCULAR MORBIDITY IN RELATION TO SOME RISK FACTORS
IN URBAN AREA

Risk Factor	Status	Cardiovascular morbidity		Total (N=401)
		Present (n=54)	Absent (351)	
Exercise	No	43(86.0)	267(76.1)	310(77.3)
	Yes	7(14.0)	84(23.9)	91(22.7)
Smoking	No	37(74.0)	258(73.5)	295(73.6)
	Yes	13(26.0)	93(26.5)	106(26.4)
Alcohol	No	45(90.0)	313(89.2)	358(89.3)
	Yes	5(10.0)	38(10.8)	43(10.7)
BMI	<18.5	0(0.0)	4(1.1)	4(0.1)
	18.5-24.99	21(42.0)	219(62.4)	240(59.9)
	>25	29(58.0)	128(36.5)	157(39.2)
Hypertension	Normal	6(12.0)	40(11.4)	46(11.5)
	Prehypertension	11(22.09)	177(50.4)	188(46.9)
	Stage I	11(22.0)	97(27.6)	108(26.9)
	Stage II	22(44.0)	37(10.5)	59(14.7)

22.7% of urban geriatric population was involved in regular physical exercise. Among those who were morbid 86.0% were non exercisers. In urban area 26.4% of geriatric population was smoking and among those who were morbid 26.0% were currently smoking. 66.0% of those who were having cardiovascular morbidity was either stage I or stage II hypertensives.

Discussion :

According to N.F.H.S. III geriatrics constitute 7.8% of total population. In our study we also found almost similar proportion of geriatric population. Prevalence of cardiovascular morbidity was almost equal in rural and urban area i.e. about 12.0% Elango et al (1998) reported that 7% of geriatrics suffers from cardiovascular morbidity. Majority of cardiovascular morbidity in rural and urban area is constituted by coronary artery disease i.e. 44.4% and 60.0% respectively; Prakash R (2004) also reported similar findings. 39.1% of rural geriatric and 41.6% of urban geriatric were hypertensives. Prakash R (2004) reported 40.0% prevalence of hypertension in geriatric population of an urban area of Rajasthan. In urban area higher percentage of geriatric population was involved in regular physical exercise. There were more current smokers in rural area as compared to urban area. There were more obese in urban area as compared to rural area.

Conclusions :

cardiovascular morbidity constitutes a sizeable proportion of total morbidity and keeping in view the increasing number of geriatrics it is bound to increase.

Therefore policy makers should also give emphasis on providing specialized care to geriatric through primary health care. Since cardiovascular deteriorates quality of life it is also necessary to provide rehabilitative services to those who are affected. There should be program for regular screening of geriatric population for hypertension so that early treatment can be started and complications prevented.

References :

1. NSSO: Socio economic profile of the aged persons 52nd round. July 1995 - June 1996, sarvekshana, 15(2), New Delhi.
2. CENSUS (2001) Registrar General and Census Commissioner, India 2001. Provisional population. Totals, paper - 1 of 2001.
3. ELANGO S (1998): A study of health and health relate social problems in the geriatric population in a rural area in Tamil Nadu. Indian journal of public health; 1998; 42(1);7-8.
4. Prakash, Rahul, Chaudhary SK, Singh UC (2004): A study of morbidity pattern of geriatric in an urban area of Udaipur, Rajasthan. Indian Journal of community Medicine; Vol 29; No 1 (2004-01-2004-03).



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