International Journal of Community Medicine and Public Health
Satyanarayana PT et al. Int J Community Med Public Health. 2017 Dec;4(12):4718-4721
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20175357

Original Research Article

Hypertension and QOL among rural elderly

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Received: 14 October 2017
Accepted: 11 November 2017

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ABSTRACT

Background: Aging is a natural phenomenon and quality of life among elderly gets compromised. The biggest killers among old age are heart disease and stroke and greatest cause of morbidity are sensory abilities, Diabetes and depression. The life of elderly gets compromised when they start facing problems to fulfil basic requirements such as social relations; personal care, nutrition and accommodation added to old age health problems.
Methods: It was a community based cross sectional study from June to September 2017 and study duration was for 3 months. Sample size calculated was 201 and was rounded off to 230. Snowball sampling technique was used. Data regarding socio-demographic profile and morbidity status was collected using semi structured questionnaire. QOL was assessed using WHO QOL OLD Questionnaire after informed consent. All those aged above 60 years were included in the study and those who are chronically sick and beds ridden were excluded from the study. Data were entered in Microsoft excel and analyzed using SPSS v22. Level of significance was defined with p value less than 0.05. Mean and standard deviation were calculated and to compare between various group Independent t test applied.
Results: Among 231 study participants, 122 (48.8%) belonged to 60-65 years age group, 126 (54.5%) were females, 130 (56.3%) were illiterates and 119 (51.6%) were completely dependent financially on family members, 97 (41.9%) were Hypertensive. Statistically significant difference was found in AUT domain where non-hypertensives had higher scores. Male hypertensives comparatively had better scores; literate hypertensives had better scores compared to illiterate hypertensives in SAB, AUT, PPF, INT domains.
Conclusions: Hypertension affects the quality of life and age, marital status, education also has some effect on the QOL in elderly stressing the importance of addressing the issues in regular clinics.

Keywords: Hypertension, Elderly, QOL

INTRODUCTION

Aging is a natural phenomenon. Aging is unavoidable ad sometimes undesirable. Birth, infancy, adolescence, adulthood and elderly being the major events in life. When one enters the final stage of life called old age, there conceals a terrible feeling of unnecessary and unessential in every corner of this stage. According to WHO, first time in history, most people can expect to live into their sixties and beyond. Population aging is happening very quickly and it's estimated that by 2050 more than 22 percent of global population would be elderly. The biggest killers among old age are heart disease and stroke and greatest cause of morbidity is sensory abilities, diabetes and depression.[1] World Health Organization (WHO) defines quality of life (QOL) as individual's perception of their position in life in context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns".[2] It also adds several domains which includes physical health, mental health, social functioning and emotional well-being.[3] India is in demographic transition phase and is expected to be next greying country very soon in the world. The life of elderly gets compromised

when they start facing problems to fulfill basic requirements such as social relations; personal care, nutrition and accommodation added to old age health problems. Quality of life for elder person has become increasingly important to design interventions to promote healthy aging process and also identifying the factors which are relevant to the quality of life in older adults. Elderly will be facing failing health which is physiological but at the same time they will be facing social neglect, social isolation, lowered self-esteem and addressing these issues would be of immense help among these elderly. As in this age group, most of them would be retired or about to retire, they would also be facing economic instability as planning retirement with pension would be availed only by few which also decrease self-esteem as they become financially dependable on their younger ones. Fear of death engulfs more during this time and added morbidities will add on the issue.

Cardiovascular diseases (CVD) are responsible for about 25% of the disability adjusted life year lost (DALYs) due to non-communicable. Among various diseases in elderly, hypertension is very common cause of both morbidity and mortality. Hypertension is a multi-factorial disorder in which the mix of factors operative may vary according to age. Hypertension is an important risk factor for cardiovascular morbidity and mortality, particularly in the elderly and what makes it more significant is its often asymptomatic chronic disease, requiring good control and persistent adherence to prescribed medication to reduce the risks of cardiovascular, cerebro-vascular and renal disease.[4,5] With this above back ground the study was started among elderly population to identify the prevalence of hypertension and asses quality of life among elderly hypertensives.

METHODS

It was a community based cross sectional study carried in UHTC, field practice area of MVJ Medical College and Research Hospital, Hoskote. Study period was from June to September 2017 and study duration was for 3 months. Sample size calculation considering the expected standard deviation (SD) of QOL score in the elderly population[4] to be 10.88 and tolerable error 1.5% at 95% confidence interval, the minimum sample size came out to be 201 by the formula ($1.96^2\sigma^2 l^2$), where 'σ' is standard deviation and 'l' is allowable error. Taking 10% as non-response rate, the final sample size was calculated as 230. Snowball sampling technique was used. Data regarding socio-demographic profile and morbidity status was collected using semi structured questionnaire. QOL was assessed using WHO QOL OLD questionnaire after informed consent. All those aged above 60 years were included in the study and those who are chronically sick and beds ridden were excluded from the study. Data were entered in Microsoft excel and analyzed using SPSS v22. Level of significance was defined with p value less than 0.05. Mean and standard deviation were calculated and to compare between various group Independent t test applied.

RESULTS

Among 231 study participants, 122 (48.8%) belonged to 60-65 years age group, 126 (54.5%) were females, 130 (56.3%) were illiterates and 119 (51.6%) were completely dependent financially on family members (Table 1).

Table 1: Distribution of study participants according to socio demographic profile of study participants.

S.no.	Variables	N=231 (%)	
1	Age in years	60-65	122 (48.8)
		66-70	53 (21.2)
		71-75	31 (12.4)
		75-80	14 (5.6)
		80 and above	30 (12)
2	Gender	Male	105 (45.5)
		Female	126 (54.5)
3	Education	Literate	101 (43.7)
		Illiterate	130 (56.3)
4	Financial dependency	Partially dependent	50 (21.6)
		Completely dependent	119 (51.6)
		Completely independent	62 (26.8)

Table 2: Distribution of study participants according to hypertension.

S. no.	Morbidity (%)		
1	Hypertension (N=231)	Present	97 (41.9)
		Absent	134 (58.1)
Among hypertensives (n=97)			
1a	Drug regimen	One drug regimen	88 (91.7)
		More than one drug	9 (8.3)
1b	Family history of hypertension	Present	34 (35.1)
		Absent	63 (64.9)
1c	Duration of disease	Less than one year	13 (13.4)
		1 to 5 years	43 (44.3)
		6 to 10 years	26 (26.8)
		11 years and above	15 (15.5)

Among 231 study participants, 97 (41.9%) were hypertensive. Among 97 hypertensives, 88 (91.7%) followed one drug regimen, 34 (35.1%) had family history of hypertension and 43 (44.3%) participants had duration of hypertension of 1-5 years (Table 2).

Descriptive statistics associated with the six facets of quality of life, viz. "sensory abilities (OLD–SAB)", "autonomy (OLD–AUT)", past, present and future

activities (OLD–PPF)", "social participation (OLD–SOP)", "death and dying (OLD-DAD)" & "intimacy (OLD-INT)" and the transformed total QOL scores (TTS) among the study population. The Table-3 shows the six facets of quality of life among the study population with those hypertensives and non-hypertensives. Statistically significant difference was found in AUT domain where non-hypertensives had higher scores (Table 3).

Table 3: Comparison of QOL among hypertensive and non-hypertensive.

		HTN	N	Mean (SD)	P value #	TFS	P value #
1	SAB	Present	97	15.19±1.8	0.7	69.9±11.4	0.7
		Absent	134	15.05±3.0		69.07±18.9	
2	AUT	Present	97	14.72±2.9	0.04	67.01±18.2	0.04
		Absent	134	13.91±3.1		61.9±19.7	
3	PPF	Present	97	14.71±2.0	0.25	66.9±12.5	0.25
		Absent	134	14.39±2.2		64.9±13.8	
4	SOP	Present	97	13.76±2.9	0.19	61.0±18.5	0.19
		Absent	134	13.28±2.7		57.9±16.9	
5	DAD	Present	97	15.15±1.3	0.7	69.7±8.3	0.7
		Absent	134	15.30±3.5		70.6±22.05	
6	INT	Present	97	15.82±2.2	0.8	73.9±14.03	0.8
		Absent	134	15.75±2.6		73.4±16.7	
7	TOT	Present	97	89.36±9.1	0.2		
		Absent	134	87.7±10.7			

Table 4: Factors affecting QOL among hypertensives.

		SAB	AUT	PPF	SOP	DAD	INT
Gender	Male	68.6±11.8	67.6±16.7	68.0±10.3	59.0±18.0	70.5±8.3	73.8±14.9
	Female	71.3±10.9	66.3±19.9	65.7±14.5	63.1±18.9	68.7±8.4	73.9±13.0
P value		0.24	0.7	0.3	0.2	0.28	0.9
Education	Literate	73.9±9.4	74.0±13.7	70.2±13.2	62.1±19.9	70.7±8.6	78.2±14.2
	Illiterate	66.9±11.9	61.8±19.4	64.5±11.5	60.1±17.4	68.9±8.1	70.7±13.1
P value		0.003	0.01	0.02	0.59	0.31	0.009
Marital status	Married	70.9±11.3	68.1±17.6	67.4±12.6	61.1±18.2	69.3±8.6	74.2±13.4
	Others	64.8±10.9	61.3±20.4	64.4±12.2	60.5±20.3	71.4±6.8	72.2±17.0
P value		0.04	0.17	0.38	0.9	0.35	0.6
Age	Less than 65	72.0±11.8	71.1±18.0	69.1±12.6	65.1±16.8	69.1±8.1	76.9±11.7
	More than 65	67.7±10.6	62.7±17.5	64.7±12.1	56.7±19.3	70.3±8.6	70.8±15.5
P value		0.006	0.02	0.08	0.02	0.49	0.03

In the present study, various factors were analyzed among those who had hypertension. Male hypertensives comparatively had better scores in AUT, PPF, DAD domains compared with females however there was no statistical significance. Literate hypertensives had better scores compared to illiterate hypertensives in SAB, AUT, PPF, INT domains and this difference was statistically significant. Married participants had better scores in SAB domain compared with other (divorced/separated/widow) participants which was statistically significant. Participants of age group of less than 65 years had better scores in SAB, AUT, PPF, SOP, INT domains which was statistically significant compared to those who were above 65 years (Table 4).

DISCUSSION

The present study was a community based cross sectional study carried out for period of three months by interview technique to know the morbidity pattern and asses the QOL among elderly using WHO QOL OLD questionnaire. Among 231 study participants, 122 (48.8%) belonged to 60-65 years age group, 126 (54.5%) were females, 130 (56.3%) were illiterates and 119 (51.6%) were completely dependent financially on family members.

The present study showed the prevalence of hypertension in elderly around 41.9%. Similar prevalence of hypertension among elderly was seen in Kalavathy et al and Bharathi et al.[5,6] One more South Indian study although showed lower prevalence and but showed increasing prevalence of hypertension as age progresses in elderly.[7]

In the present study, comparing hypertensives with non-hypertensives, statistically significant difference was found in AUT (AUTONOMY) domain which is independence in old age, being able or free to live and

take own decisions where non-hypertensives had higher scores and better QOL and in all other domains there was no any significant difference. In the study done by Ganesh et al which used WHO QOL BREF questionnaire, showed no difference among hypertensive and non-hypertensive participants in physical, psychological and social domain which was similar to the present study.[8] Study done by Kaliyaperumal et al which used short form 36 item health survey questionnaire showed difference only in vitality domain and physical aspects and rest of domains aspects and rest of aspects were least affected.[9]

The present study showed male hypertensives comparatively had better scores in AUT, PPF, DAD domains compared with females however there was no statistical significance. Similar results were seen in study done by Ganesh et al and Barau et al showing that gender had no influence on QOL.[8,9] Literate hypertensives had better scores compared to illiterates hypertensives in SAB, AUT, PPF, INT domains similar results were seen in study done by Ganesh et al showing that literacy had an impact on QOL however in Barau et al study revealed no difference among literate and non-literates.[8,10] Married participants had better scores in SAB domain with divorced/separated/widow participants which was statistically significant similar results were seen in Ganesh et al.[8]

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Limitations

The study has got its own limitations as under reporting of diseases as in the present study only the diagnosed cases and who are on treatment were taken into consideration. We could not study some factors like mental health status, complications of chronic morbid conditions of the elderly which could have definitely influenced QOL.

CONCLUSION

Quality of life is compromised as age increases. Elderly being more prone for non-communicable diseases, promoting healthy lifestyles are extremely important in this age group needed for healthy aging. With more and more people living beyond 60 years there is an obligatory need of stressing the importance of new strategies and new intervention focusing on this age group.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Satyanarayana PT, Chikkegowda LK. Hypertension and QOL among rural elderly. Int J Community Med Public Health 2017;4:4718-21.