Quality of Life of Hypertensive Patients Treated at an Outpatient Clinic

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Summary

Background: The main cause of mortality in braziliam population is the cardiovascular disease and arterial hypertension (AH) the most prevalent one. The antihypertensive treatment is effective however it is not well known how affects the quality of life (QOL) in patients afterwards.

Objective: To comparatively assess the QOL in patients submitted to an antihypertensive treatment.

Methods: One-hundred patients with AH were studied of which 46 had complied with a standard treatment regimen (group A) and 54 (group B control) were about to start the same regimen. We collected clinical and sociodemographic data and questions focusing sexuality, self-perception of QOL, number and types of medication taken and their influence on sex life. The questionnaire SF-36 was also administered. The data were analyzed using the tests chi-square, Student's t, Pearson correlation and Tukey.

Results: No differences were detected between group A and B in any of the SF-36 domains. There was an association between the question on self-perception of QOL and the SF-36 domains, emotional aspects excepted. As regards sexuality, there was difference in the quality of sex life between the groups, which was less satisfactory for group A.

Conclusion: When the SF-36 was administered no changes in QOL were detected between the groups because it is an asymptomatic chronic disease. The SF-36 did not properly assess emotional aspects in our case series of hypertensive patients that had high behavior variability. Group A showed lower quality sex life; however, this was not related to the number and type of medication used. (Arq Bras Cardiol 2007;88(6):624-628)

Key words: Quality of life; hypertension/therapy; outpatients; questionnaires.

Introduction

The primary objective of antihypertensive treatment is to reduce the morbidity and mortality caused by cardiovascular diseases associated with high blood pressure values. But concurrently with the benefits for hypertensive patients who are adequately treated, antihypertensive medication may produce adverse effects which affect the pleasure of living. It is essential therefore to assess the influence of the medication used on the quality of life (QOL) of patients[1].

QOL is defined by the World Health Organization as "an individual's perception of his/her position in life, in the context of the culture and value systems in which he/she lives and in relation to his/her goals, expectations, standards and concerns"[2].

There are several instruments or questionnaires available that allow a reasonable assessment of the QOL of patients with different diseases. These instruments can be divided into two groups: the specific ones, that are based on individual assessment and the generic ones[3-8]. Specific instruments are an alternative way to assess certain aspects of QOL in an individual and specific fashion, and may detect changes in the aspects studied.

Generic instruments are developed and applied to reflect the life of patients in a wide variety of populations and include such aspects as function, dysfunction and physical and emotional well being. Among the generic instruments is the SF-36 *(The Medical Outcomes Study 36-item Short-Form Health Survey),* that assesses the health profile. It is easy to administer and understand and is widely used in the literature[9,10]. Additionally, it has been translated into Portuguese and validated for our milieu[11].

The objective of this study was to assess qualitative and quantitative aspects of QOL in hypertensive patients by administering the SF-36 generic questionnaire focusing on sexuality, self-perception of QOL, number and type of medication used and impact on sex life.

Methods

One hundred hypertensive patients were assessed, of which 69 were female, aged from 40 to 85 years, who were treated at the Regional Specialty Outpatient Clinic - NGA 34 of the city of Presidente Prudente, state of São Paulo, Brazil,

in the period from October 2003 through February 2004, with a history of AH for more than five years. All the patients were following some type of antihypertensive treatment.

The collection of clinical and sociodemographic data and of the questionnaires was carried out on an individual basis by the same researcher and took approximately forty minutes.

Two groups of hypertensive patients were created: Group A - 46 patients following the standard treatment at the NGA-34 for five years; Group B - control - 54 consecutive patients, recently admitted to the NGA-34 to start the standard treatment.

The standard treatment at NGA-34 comprised, besides the medication supplied by the Single Health System (SUS) free of charge, a special scheme that included monthly visits with a multiprofessional team made up of a physician, a nurse, a nutritionist, an occupational therapist and a physiotherapist, as well as educational lectures on AH. After these educational activities the patients were followed up by means of monthly visits with an occupational therapist and engaged in manual activities, games and relaxation sessions, besides physiotherapy follow up sessions which included aerobic activities.

For the one hundred patients, data including age, gender, race, marital status, level of education, family income expressed in minimum wages, the duration of AH, and comorbidities were collected. Questions focusing on sexuality, self-perception of QOL, number and type of medication used and their impact on sex life were asked.

SF-36 was administered to all patients. This questionnaire is comprised of 35 items that cover eight components: functional capability, physical aspects, pain, general health status, vitality, social aspects, emotional aspects and mental health. There is also an item that assesses the evolution of the patient's health, comparing the current health status with that of one year before. This item does not score as a question but rather provides information on the patient's condition. The physical component includes functional capabilities, physical aspects and pain and the general health status. The mental component includes mental health, functional aspects, social aspects and vitality.

The functional capability scale assessed not only the presence but also the extent of physical capability limitations. The vitality scale considered the level of energy and fatigue, the disposition to look for new tasks and face the challenges they pose. As regards the physical and emotional aspects, we assessed the extent to which these limitations impacted the patient's daily life, making it difficult for him/her to perform his/her regular activities. As concerns pain, we assessed its intensity and whether it limited the patient's daily life somehow. Social aspects assessed the patient's integration into social activities. The mental health component assessed anxiety, depression, alterations in behavior or emotional dyscontrol and psychological well being. Each question was attributed a score from zero to 100, with 100 being the best and zero being the worst health status, according to the SF-36 score.

The numeric data of the clinical and sociodemographic characteristics (age, family income, number of minimum wages, number of people living in the home, per capita income and duration of hypertension) were submitted to the test for unrelated samples (Student's t test). The chi-square test was applied to compare categorical data between groups such as gender, age group, ethnic group, marital status, level of education, comorbidities, the question of sexuality, type and number of medication used and the impact of medication on quality of sex life.

The SF-36 data were submitted to Student's t test. Pearson's correlation coefficient was used to investigate the dependency ratio between age and all the domains of the SF-36, analyzing the total sample and groups A and B individually. The model of analysis of variance via Tukey's multiple comparison method was used to analyze the SF-36 domains in association with the response given to the question on QOL self-perception. In all the statistical tests considered, the level of significance $\alpha = 5\%$ was adopted to verify the rejection of the null hypothesis ($p \leq 0.05$).

Results

Table 1 shows the clinical and sociodemographic characteristics of the patients of the groups studied. There was a statistically significant difference between the groups as to age and duration of disease in years.

Table 2 shows that 73% of the patients were sexually active, and in the age group between 62 and 73 years, sex life was more unsatisfactory ($p < 0.05$), and more satisfactory in the age group below 50 years.

Table 3 shows the two groups as concerns the quality of their sex life; here, group B presented more satisfactory sex life than group A ($p < 0.05$). On normalization for age between the two groups, group B presented a significantly higher percentage of unsatisfactory sex life for the age group between 62 and 73 years, as was the case for the same analysis carried out for the total sample (Tables 4 and 5)

As regards the number of medications used and sexual satisfaction, there was no significant dependency in the general sample ($p=0.710$) and in groups A ($p=0.688$) and B ($p=0.623$) alike, and also as regards the type of medication used in the general sample ($p=0.820$) and in groups A ($p=0.504$) and B ($p=0.703$) as well. As regards the impact of medication on sex life quality, there was no significance in the groups studied ($p=0.999$).

The means and standard deviations for the SF-36 domains in the general sample were the following, respectively, for each aspect: emotional aspects (74.3 ± 42.3), physical aspects (55.7 ± 46.6), social aspects (76.8 ± 28.0), functional capability (62.8 ± 25.5), pain (61.4 ± 26.1), general health status (72.1 ± 21.3), mental health (70.2 ± 23.0), vitality (68.8 ± 22.9), physical score (62.2 ± 23.5), mental score (72.6 ± 23.2).

Table 6 shows that there were no statistical differences between the means and standard deviations for the groups studied.

The study on the ratio between the ages and the SF-36 domains showed no significant dependency for the general sample and for groups A and B as well.

There was an association between the perception of quality of life and each SF-36 domain (physical aspects, $p=0.017$; social aspects, $p=0.001$; functional capability, $p=0.005$; pain,

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Table 1 - Baseline clinical and sociodemographic characteristics

	Group A (n=46)	Group B (n=56)	
	Means		Value of p
Age - years	62.7± 9.3	57.9 ± 11.6	0.029*
Gender			
Female	32	37	0.91
Male	14	17	0.91
Marital Status			
Married	25	35	0.73
Unmarried	21	19	0.73
Ethnic group			
White	27	35	0.73
Non-white	19	19	0.73
Duration of AH - years	15.6 ± 9.1	12.4 ± 7.1	0.045*
Comorbidity			
Diabetes mellitus	16	11	0.18
None	27	35	0.18
Nenhum	3	8	0,18
Schooling			
Literate	35	46	0.06
Illiterate	11	8	0.06
Family Income (minimum wage/R$)	642.6	641.8	0.99
Number of minimum wages	2.68	2.67	0.99
Number of people in the home	2.83	2.7	0.68
Per capita income	1.06	1.14	0.55

*p < 0.05; NS - non-significant.

Table 2 - Quality of sex life of hypertensive patients according to age

	Age				
Sex life	Below 50	From 50 to 61	From 62 to 73	74 and above	Total
Satisfactory	36.0% (9)*	36.0% (9)	20.0% (5)	8.0% (2)	100% (25)
Unsatisfactory	10.4% (5)	29.2% (14)	50.0% (24)*	10.4% (5)	100% (48)
Total	19.2% (14)	31.5% (23)	39.7% (29)	9.6% (7)	100% (73)

* p<0.05

Table 3 - Quality of sex life

	Satisfactory	Unsatisfactory	Total
Group A	6	26	32
Group B	19*	22	41
Total	25	48	73

* p<0,05

p=0.001; general health status, p=0.001; vital health, p=0.001; vitality, p=0.001; physical score, p=0.001, mental score, p=0.001), except as regards the emotional aspect (p=0.23).

Discussion

Characteristics relating to the patient such as age, gender, race, formal schooling, occupation, marital status, religion, life habits, in addition to cultural aspects, beliefs and

Table 4 - Quality of sex life according to age group in Group A

Sex Life	Age				
	Below 50	From 50 to 61	From 62 to 73	74 and above	Total
Satisfactory	0.0% (0)	50.0% (3)	33.3% (2)	16.7% (1)	100% (6)
Unsatisfactory	7.7% (2)	26.9% (7)	50.0% (13)	15.4% (4)	100% (26)
Total	6.3% (2)	31.3% (10)	46.9% (15)	15.6% (5)	100% (32)

Table 5 - Quality of sex life according to age group in Group B

Sex Life	Age				
	Below 50	From 50 to 61	From 62 to 73	74 and above	Total
Satisfactory	47.4% (9)	31.6% (6)	15.8% (3)	5.3% (1)	100% (19)
Unsatisfactory	13.6% (3)	31.8% (7)	50.0% (11)*	4.5% (1)	100% (22)
Total	29.3% (12)	31.7% (13)	34.1% (14)	4.9% (2)	100% (41)

* p<0,05

Table 6 - Mean and standard deviations for SF-36 domains (Raw Scale) for groups A and B

	Groups	EA	PA	AS	FC	P	GHS	MH	V	PS	MS
A	Mean	72.5	56.0	78.0	63.6	60.6	75.1	70.9	71.6	63.9	73.2
	(SD)	(43.5)	(47.8)	(28.3)	(27.2)	(27.5)	(20.3)	(26.3)	(24.3)	(26.3)	(26.0)
B	Mean	75.9	55.6	75.7	62.2	62.1	69.5	69.7	66.5	62.7	72.1
	(SD)	(41.7)	(46.0)	(28.0)	(24.2)	(25.2)	(22.0)	(20.0)	(21.7)	(21.2)	(20.8)
	(P)	0.686	0.964	0.691	0.791	0.781	0.187	0.802	0.266	0.805	0.828

S - Significant (p < 0.05)*; NS - Non-significant. SD - Standard Deviation; EA - Emotional Aspects; PA - Physical Aspects; SA - Social Aspects; FC - Functional Capability; P - Pain; GHS - General Health Status; MH - Mental Health; V - Vitality; PS - Physical Score; MS - Mental Score.

socioeconomic context may impact QOL. This is why it is important to assess them by means of instruments that can quantify them[12].

Most studies that assess QOL use generic instruments such as the SF-36, which have been proven to be valid and reliable for different populations, including the Brazilian population[11,13-15].

Very few studies in the literature record the QOL of hypertensive patients and according to Alderman, in 2005, of 4,300 articles published in a journal specializing in QOL since 1987, only nine dealt with AH, and of these only two presented this chronic condition as the primary factor of study[16].

AH is an asymptomatic disease, but studies show that the secondary effects of the treatment itself are associated with lower compliance with and abandonment of medication treatment, and may impact the QOL of these patients. For some, the fact that they take medication is a more difficult problem to deal with than the disease itself.

Roca-Cusachs et al, in 2001, assessed the impact of QOL clinical variables and reported that hypertensive patients experienced significant reduction in QOL when compared with normotensive individuals[17]. Li et al[18], in 2005, studied the Chinese population and observed that QOL was higher in normotensive than in hypertensive individuals and also verified that hypertensive patients who were under treatment and whose pressure levels were under control had higher QOL than those who were under treatment but whose pressure levels were not controlled[18].

This study assessed the QOL of hypertensive patients treated in an outpatient clinic for a period of five years, considering compliance as the degree of coincidence between the prescription and the patient's behavior[12]. Group A was comprised of patients monitored for more than five years, with a high degree of compliance with the treatment, and group B (control group) was comprised of patients recently admitted into the specialty outpatient clinic.

The baseline clinical and sociodemographic characteristics of patients were similar, except as regards the duration of

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AH and age, which were higher for patients who complied with the standard treatment regimen. In view of this, we performed normalization for age, so as to make the case series more homogeneous.

When assessing the quality of sex life of the two groups, in addition to a high dissatisfaction ratio, hypertensive patients who complied with the treatment regimen were the most dissatisfied. We know that the quality of sex life may be affected by physical and psychological factors and by the medication used. Knowledge of the AH diagnosis may influence the reporting of symptoms, work absenteism and QOL, perhaps because patients feel stigmatized after discovering that they have the disease[19-22]. When we assessed the number and classes of antihypertensive medication used, no difference was observed between the two groups analyzed, which may be due to the size of the sample and its segmentation by virtue of the variety of possible combinations of medications considered in the study. Greater awareness of the diagnosis and longer duration of HA in patients who had complied with the treatment regimen for a long time (five years) may have influenced the result. Additionally, when patients were asked about the impact of medication on the quality of their sex life, most did not confirm experiencing such impact. The results obtained for the two groups with the administration of the SF-36 did not show differences in QOL, although the compliant group had more knowledge about the disease. A possible explanation of these results might be found in the type of treatment, in which the multiprofessional team, educational and informative efforts play a key role in allowing patients to better understand hypertension as a risk factor. It is understandable that the problems of everyday life added to other events caused by a chronic condition have to be addressed as regards the individual's interaction with and adaptation to the disease and his milieu, to improve his QOV[23]. The interventions have enabled good social integration, a good rapport with the doctor and the health team, easy access to medication and leisure activities, which may have improved the QOL of these patients.

As regards the results obtained by administering the SF-36 questionnaire, there is no single mean in the literature that can summarize the assessment. When the results of this study are compared to other studies which assessed the QOL of hypertensive patients and in which this instrument was also used, the means obtained were similar[24]. The mean for physical aspects was the lowest of all the domains assessed, which could be associated with the mean age of the sample.

Although we did not have a control group composed of normotensive individuals, if we compare the means obtained for the two groups with the QOL means of the normal population in Britain, the United States, France and Sweden which were studied and reported in the papers by Brazier et al[13], Perneger et al[14], Sullivan et al[15], we observe that the values obtained for hypertensive patients assessed in both groups were below the normal mean reported in the studies above mentioned[13-15].

Studies that compare groups of hypertensive and normotensive individuals concluded that there is a deficit in the QOL of hypertensive relative to normotensive individuals, not only because of their knowledge of the diagnosis of the disease but also because of the adverse effects of the drugs used in the antihypertensive treatment[17,25].

Emotional aspects varied greatly. Only 10% did not report emotional variations, whereas others reported sadness (13%), anxiety (15%) and nervousness (34%).

When we associated the question on QOL according to the patient's perception with each one of the SF-36 domains, we found differences in the emotional component. The emotional aspects of our case series presented high variability and the administration of the SF-36 generic questionnaire may not be suitable to assess them appropriately. For these aspects, the SF-36 failed to reflect the actual QOL reported by the patients analyzed in this study, since QOL, by virtue of its very definition, should encompass broader aspects of an individual's life. Additionally, the SF-36 did not measure QOL concepts relating to the sex life of patients, because this aspect is not included in the construction of this instrument.

The SF-36 questionnaire quantifies QOL in an objective fashion, measuring health aspects and activities generally affected by health status and condition. However, more subjective components, such as mental health, may not be adequately measured[26]. Measuring QOL is undoubtedly a complex task, and although SF-36 is widely used for this purpose, it has limitations. Therefore, some questions require extra care when selecting which instrument should be used.

Potential Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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Study Association

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