QUALITY OF LIFE IN ELDERLY INPATIENTS WITH ATRIAL FIBRILLATION AS COMPARED WITH CONTROLLED SUBJECTS

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Abstract: **Objectives:** Since few studies have investigated Health related Quality of Life (HRQoL) in older patients with atrial fibrillation, the aim of this cross-sectional study was to compare HRQoL in AF elderly inpatients of 65 and more with that of age-matched controlled subjects. **Design:** HRQoL was assessed with two generic HRQoL instruments: the MOS-SF 36, a largely recognized instrument, and the Duke Health Profile. **Setting and patients:** Nancy University Hospital patients presenting with atrial fibrillation and three controls per patient free of cardiac arrhythmias, matched by age, sex and hospital department to atrial fibrillation patients. **Results:** Forty one atrial fibrillation patients and 123 controls were included. Both groups were comparable for associated disorders, other than coronary artery disease and chronic respiratory failure. After adjustment, scores among atrial fibrillation patients were lower than among controls in 8 of 10 Duke and 6 of 8 SF-36 subscales. In terms of Quality of Life, meaningful differences (≥5 points) were recorded in the Duke: Mental, Depression, Anxiety, General Score; and in the SF-36: Physical functioning, Role emotional, Social functioning and Vitality. Nevertheless statistically significant differences were only observed for the Duke Mental (p=0.01), Depression (p=0.003) and Anxiety (p=0.03) scores. **Conclusions:** In our study HRQoL measured in elderly inpatients with atrial fibrillation as compared with matched controlled was mainly altered in the “psychological” domains of the Duke Health Profile. From the patient’s point of view, atrial fibrillation appears to have more mental than physical consequences. This study pointed out the utility to assess HRQoL in the management and treatment of elderly hospitalised atrial fibrillation patients.

**Key words:** Quality of life, elderly, atrial fibrillation.

**Abbreviations:** AF patients : patients with atrial fibrillation; HRQoL : Health related Quality of Life; CQV : CliniQualVie study; OAT : Oral Anticoagulant Treatment; SF-36 : MOS SF-36 questionnaire; Duke : Duke Health Profile questionnaire.

Introduction

Atrial fibrillation (AF) is the most common cardiac arrhythmia. The prevalence of nonrheumatic AF increases with age, ranging from 0.5% at 50-59 years to more than 10% at 80-99 years (1). Its annual incidence increases from 0.2 per 1000 at 30-39 years to 39 per 1000 at 80-89 (2).

AF increases the risk of stroke (2) and palpitations, and may result in poor exercise tolerance and left ventricular dysfunction. The recommended management strategy is rate control with oral anticoagulant treatment (OAT) (3, 4), but the literature also shows that OAT increases the risk of bleeding, particularly in older individuals. AF may alter Health related Quality of Life independently or in conjunction with OAT.

Quality of life is a multidimensional concept based on the patient’s own perception of his or her health. The aim of measuring it is to obtain information about aspects of health not systematically taken into account in a standard clinical evaluation, including physical, functional, psychological and social dimensions.

Other authors have evaluated HRQoL in patients with AF (5, 6), mainly in the context of interventional therapy (6-10). Some studies have evaluated HRQoL in patients receiving medical treatment for AF (11-14), and looked at the impact of AF on HRQoL as compared to healthy controls or other cardiac disease patients (15-20). Most of these studies have included patients of a mean age of less than 65 with few exceptions (see reviews 5, 6). The aim of the present cross-sectional study was to compare HRQoL in AF elderly inpatients with that of age-matched controlled subjects.

Materials and Methods

Sample and procedure

This study was cross-sectional and part of the CliniQualVie Program aiming at assessing quality of life systematically at hospital admission (21). Approval was given by the Regional Ethics Committee. Patients eligible for screening were consenting adults aged 18-79 years admitted from Saturday afternoon to Monday afternoon between April 1997 and April 2000 to 10 different medical and surgical units at Nancy University Hospital specializing in cardiovascular, respiratory, urinary tract and musculoskeletal disorders. Both emergency and elective admissions were eligible. These two days of the
week were considered as the most appropriate to allow a comparable recruitment in the different units participating in the study. Patients who were not able to complete a questionnaire were excluded. Research assistants met potential subjects on the first day of hospitalisation in order to obtain consent and gather sociodemographic data (age, sex, school level, former occupation, way of life), health status, and treatment data (the International Classification of Diseases, tenth revision was used in the collection of information about diagnoses). All these data were ascertained from medical charts. Among the patients of the ClinQualVie study aged 65 years or more, we included all those who presented with AF at time of admission (patients with a history of resolved atrial fibrillation were excluded, AF could be or not the reason for admission); they underwent full clinical examination and ECG. Three controls per patient were drawn at random from inpatients without cardiac arrhythmias (ascertained by ECG) and matched to study subjects by age, sex and hospital department (ensuring comparable comorbidities).

Measures

Quality of life

HRQoL was assessed using two validated self-administered generic questionnaires: the Medical Outcomes Study Short-Form 36 (SF-36) and the Duke Health Profile (Duke).

Two generic questionnaires were chosen to allow comparisons across the wide range of disease groups that might be expected by recruiting patients from different medical and surgical wards. The SF-36 is a largely used HRQoL scale (and the scale considered as reference for many people). The Duke Health Profile was chosen as it could be another interesting generic questionnaire to be used in a general hospitalized population. Its shorter length may be particularly interesting in weakened, older patients.

The SF-36 (22) measures health status in eight dimensions: Physical functioning, Role limitations due to physical problems, Vitality, Mental health, Role limitations due to emotional problems, Social functioning, Bodily pain, and General health. Subjects are asked to consider their Quality of life in the past four weeks.

The DUKE is a generic 17-item patient-report questionnaire that measures health-related quality of life through six health measures or dimensions (physical, mental, social, general, perceived health, and self-esteem) and four dysfunctions (anxiety, depression, pain and disability) (23). All items ask for information current at the time of completing the questionnaire and during the preceding week.

Both questionnaires have been translated and adapted into French (24, 25).

The SF-36 and Duke questionnaires we used assessed QoL over the past week for homogeneity purpose. Responses in each dimension were summed and standardized from 0 (poor) to 100 (excellent) as recommended by the authors.

Both HRQoL questionnaires were self-administered in the first 48 hours of admission and instructions to complete them were given by research assistants to the patients. Help (glasses, pen, or item reading) was offered to patients for completion of questionnaires, when it was necessary. HRQoL scores of AF patients were compared with those of controls.

Potential confounding factors

Current disorders, and any treatment with antiarrhythmic properties or oral anticoagulant treatment likely to affect HRQoL (and that could be a potential confounding factor between atrial fibrillation and HRQoL), were taken into account in the subsequent analysis.

Data analysis

Analyses were performed with the SAS® software package for Windows.

Bivariate analyses (Pearson’s khi2, Fisher’s and Student’s t test) were used to compare AF patients and controls for potential confounding factors, and to assess the relationship between HRQoL dimensions and potential confounders. AF patients and controls were compared using a linear model (SAS PROC MIXED) for repeated measures, which allowed for the matching process and residual confounding factors to be taken into account. A p-value <0.05 was considered statistically significant.

Results

Forty one patients with atrial fibrillation and 123 matched controls were included in the study. AF patients were admitted to the following hospital departments: cardiovascular (n=28), respiratory (n=8), urinary tract (n=2), cancer (n=2) and musculoskeletal (n=1). Fourteen were women and twenty-seven men. Mean ages of subjects and controls were 72.3 (± 3.9) years and 72 (± 4) years, respectively (p=0.67).

Atrial fibrillation was permanent in 30 cases, paroxysmal in seven and discovered at admission in four. A history of stroke was recorded in one AF patient (AF-related) and two controls. Two more controls were diagnosed with stroke while in hospital.

Twenty-five AF patients reported symptoms attributable to atrial fibrillation. Atrial fibrillation precipitated the admission in 10 patients and was a co-existing illness partially responsible for the admission in 3 other patients (patients with heart failure and permanent atrial fibrillation).

Potential confounding factors

AF patients and controls differed with regard to disorders and treatments at admission. Statistically significant differences were noted for presence of coronary artery disease, chronic respiratory failure, and treatment with an oral anticoagulant or agent with antiarrhythmic properties (including digoxin and beta-blockers) (Table 1).