

Impairment of Quality of Life in Chinese Patients with Atrial Fibrillation

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SIN ET AL.: Impairment of Quality of Life in Chinese Patients with Atrial Fibrillation. Objective: To investigate the impact of atrial fibrillation (AF) on quality of life (QoL) in Chinese patients in Hong Kong. **Design:** Cross-sectional survey. **Setting:** University teaching hospital in Hong Kong. **Patients and method:** We assessed QoL in 200 consecutive patients (mean age 69±8 years, 113 men) with AF follow up in the out-patient clinic. All patients were interviewed with QoL questionnaires during follow-up in the outpatient clinic. **Main outcome measures:** QoL scores as assessed by Medical Outcomes Study Short Form-36 (SF-36) and Symptom Checklist in AF patients and compared with sex-age matched controls in 1:2 ratio. **Results:** AF patients reported significantly lower QoL scores than sex-age matched healthy controls across all domains of the SF-36, except for general health. QoL scores of AF patients on measures of physical and social functioning and mental health were 15%, 17% and 11% lower than normal controls (all $p < 0.001$). SF-36 scores in women with AF were significantly lower than men in all eight subscales (all $p < 0.05$). The symptoms frequency score (18 ± 10 vs. 13 ± 9 , $p < 0.001$) and symptoms severity score (12 ± 8 vs. 9 ± 7 , $p = 0.004$) in women were also significantly higher than men. QoL scores in patients with paroxysmal AF were significantly lower than those with persistent AF in 4 out of 8 subscales and in the overall score. Furthermore, the symptoms frequency (16 ± 10 vs. 13 ± 10 , $p = 0.008$) and severity scores (12 ± 8 vs. 9 ± 7 , $p = 0.001$) were both significantly higher in patients with paroxysmal AF than those patients with persistent AF. **Conclusions:** AF was associated with significant symptoms and impairment of QoL. Furthermore, the effect of gender and clinical pattern of AF need to be considered when using QoL as outcome measures in clinical trials for treatment of AF. (J HK Coll Cardiol 2006;14:1-5)

Atrial fibrillation, quality of life

摘要

目的：評價房顫對香港地區的中國病人生活品質的影響。**設計：**交叉組合調查。**背景：**在香港的大學教學醫院。**病人和方法：**我們在門診對200個房顫病人（平均年齡 69 ± 8 歲，其中男性113名），所有病人在門診隨訪期間均接受生活品質問卷調查。**主要結果資料：**生活品質評分通過簡明健康狀況調查表-36(SF-36)和房顫病人症狀鑒定評估而得，並根據在性別-年齡可比條件下與對照組設1:2對照。**結果：**房顫病人與健康對照組人群相比，除了一般健康狀況外，SF-36各個專案的生活品質評分顯著降低。房顫病人在生理、社交能力和心理健康水準與正常對照相比分別要低15%，17%和11%（ $p < 0.001$ ）。女性房顫病人在SF-36的8個子欄目分值均低於男性病人（ $p < 0.05$ ）。症狀頻率分值（ 18 ± 10 vs. 13 ± 9 , $p < 0.001$ ）和症狀嚴重程度分值（ 12 ± 8 vs. 9 ± 7 , $p = 0.004$ ），女性病人均顯著高於男性病人。陣發性房顫病人的生活品質評分，在8個子欄目中的4個和總分上均顯著低於永久性房顫病人。而症狀頻率分值（ 16 ± 10 vs. 13 ± 10 , $p = 0.008$ ）和症狀嚴重程度分值（ 12 ± 8 vs. 9 ± 7 , $p = 0.001$ ），陣發性房顫病人均顯著高於永久性房顫病人。**結論：**房顫將伴隨嚴重的症狀，並影響生活品質。此外對於房顫病人用生活品質進行臨床研究時要注意考慮性別和臨床種類。

關鍵詞：房顫 生活品質

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Introduction

Atrial fibrillation (AF) is one of the most common symptomatic cardiac arrhythmia and is associated with substantial health care cost. Although AF is not an immediate life threatening disease, it is associated with significant symptoms and impairment of quality of life (QoL). Therefore QoL measures are frequently used as clinical outcomes to evaluate the efficacy or compare treatment choices in treatment of AF. However, the information about the impact of AF on QoL has been very limited.¹ Most data on QoL in patients with AF originate from clinical studies that investigated specific therapeutic interventions and QoL measures were included to compare the change in health perception in patients after receiving treatment.^{2,3} These studies suggested that AF has a negative impact on QoL. However, these studies were limited by small size population and highly selected patients. Furthermore, no data on QoL in Chinese patients with AF were available. The aims of this study are to investigate the impact of AF on QoL in Chinese patients by comparing it with healthy sex-age matched controls, and to determine the role of gender and clinical pattern of AF on QoL.

Methods

Study Population

We studied the QoL and AF symptoms in 200 consecutive Chinese patients diagnosed with AF follow-up in our outpatient clinic. The diagnosis of AF in those patients was identified by reviewing patients' medical records while they visited the clinic. Patient demographic data were retrospectively collected from the medical records during their most recent clinic visit.

QoL Assessment

All patients were interviewed with two questionnaires: the Hong Kong Version of Medical Outcomes Study Short Form Health Survey (SF-36)⁴ and the symptom checklist: frequency and severity.¹ SF-36 is a generic health scale with eight subscales of health dimensions: physical functioning (PF), role limitations

due to physical problems (role-physical; RP), bodily pain (BP), general health (GH), vitality (VT), social functioning (SF), role limitations due to emotional problems (role-emotional; RE), and mental health (MH). The scores in each of the eight subscales are standardized from 0-100 (higher scores indicate better QoL). The symptom checklist: frequency and severity is a specific instrument for cardiac arrhythmias. It comprises 16 items of symptoms. The frequency and severity of symptoms are quantified (higher scores indicate worse QoL). The maximum frequency score is 64 while the maximum severity score is 48. The SF-36 scores of the study population were compared with those obtained from a sex-age matched normal cohort (n=400) that were collected in a previous local survey which established the normative values of the SF-36 Health survey of the Chinese adult population in Hong Kong.⁵ In this study, two normal controls were matched to one case by sex and age (a 5-year group range).

Statistical Analysis

Continuous variables are expressed as mean \pm 1 standard deviation and were compared using the Mann-Whitney U test. Discrete variables were compared using a Chi square test. P values <0.05 were considered to be statistically significant.

Results

Patient Population

The study population consisted of 200 consecutive patients with AF (113 men, mean age: 69 \pm 8 years). Half of them (n=100) suffered from paroxysmal AF while the others half (n=100) had persistent AF. Concomitant diseases, including hypertension was present in 47%, diabetes mellitus in 16%, congestive heart failure in 13%, ischemic heart disease in 11%, stroke in 5%, thyroid dysfunction in 5%, valvular heart disease in 4%, and chronic obstructive pulmonary disease in 3% of patients.

Comparison of QoL in Patients with AF versus Controls

Patients with AF (n=200) reported significantly

lower QoL scores than sex-age matched healthy controls (n=400) across all domains of the SF-36, except for general health (Table 1). QoL scores of AF patients on measures of physical and social functioning and mental health were 15%, 17% and 11% lower than normal controls (all $p<0.001$).

Comparison of QoL in AF Female Patients versus Male Patients

There were no significant differences between female (n=87) and male patients (n=113) with AF with respect to their age (68 ± 8 years vs. 70 ± 8 years, $p>0.05$)

and prevalence of concomitant diseases (59% vs. 60%, $p>0.05$). SF-36 scores in women with AF were significantly lower than men in all eight subscales (Table 2). The symptoms frequency score (18 ± 10 vs. 13 ± 9 , $p<0.001$) and symptoms severity score (12 ± 8 vs. 9 ± 7 , $p=0.004$) in women were also significantly higher than men.

Comparison of QoL in Patients with Paroxysmal AF versus Those with Persistent AF

There was no significant difference in age (68 ± 8 years vs. 70 ± 8 years, $p>0.05$) and gender (51% vs. 62%,

Table 1. QoL scores in AF patients versus age and sex matched controls

SF-36 score	AF (n=200)	Controls (n=400)	P-value
Physical functioning	72±24	84±17	<0.001
Role physical	70±41	80±34	0.005
Bodily pain	76±26	81±24	0.018
General health	55±24	53±20	0.46
Vitality	56±24	63±19	0.002
Social functioning	78±27	93±16	<0.001
Role emotional	71±40	80±35	0.011
Mental health	69±21	77±17	<0.001
Overall	68±20	76±16	<0.001

Table 2. QoL scores in female versus male patients with AF

	Female (n=87)	Male (n=113)	P-value
SF-36 score			
Physical functioning	61±25	80±19	<0.001
Role physical	62±45	77±36	0.025
Bodily pain	71±29	80±23	0.023
General health	49±24	59±23	0.007
Vitality	47±25	64±21	<0.001
Social functioning	71±29	83±25	0.001
Role emotional	62±45	78±35	0.015
Mental health	61±24	75±17	<0.001
Overall	60±21	74±18	<0.001
Symptom checklist			
Symptom frequency	18±10	13±9	<0.001
Symptom severity	12±8	9±7	0.004

$p>0.05$) between patients with paroxysmal AF and persistent AF. However, patients with persistent AF had a higher prevalence of congestive heart failure (20%) than those patients with paroxysmal AF (6%, $p=0.005$). Despite this, QoL scores in patients with paroxysmal AF were significantly lower than those with persistent AF in 4 out of 8 subscales (RP, SF, RE and MH) and in the overall score (Table 3). Furthermore, the symptoms frequency (16 ± 10 vs. 13 ± 10 , $p=0.008$) and severity scores (12 ± 8 vs. 9 ± 7 , $p=0.001$) were both significantly higher in patients with paroxysmal AF than those patients with persistent AF.

Discussion

Currently, only very few studies investigated the effect of AF on QoL in the general population.¹ The majority studies on QoL in patients with AF were originated from patients recruited for assessment of specific therapeutic treatments.^{2,3,6,7} These studies have shown that patients with AF have poorer QoL than the general population. However, most of the patients included in those studies were highly symptomatic or

refractory to medical treatment while this study included consecutive unselected patients to avoid biases in the assessment of the severity of their symptoms. Similar to these studies from Western countries, this study demonstrated that Chinese patients with AF had significantly impaired QoL when compared with sex-age matched controls.

Female patients with cardiovascular disease might have a poorer QoL as compared with male patients.⁸ Recent studies have suggested that female patients with paroxysmal AF have more symptoms and impairment of QoL compared with those male patients.⁹ However, the relative role of gender and clinical pattern of AF on QoL remain unclear. The results of this study have shown that both female gender and paroxysmal AF were associated with poorer QoL and more disabling symptoms than our AF patients. Therefore, effective treatment for AF in female patients and those with paroxysmal AF who are more debilitated and symptomatic may also potentially derive greater benefits than other AF patients. These factors need to be considered when QoL measures are being used to evaluate treatment choices in patients with AF.

Table 3. QoL scores in patients with paroxysmal AF versus those with persistent AF

	Paroxysmal AF (N=100)	Persistent AF (N=113)	P-value
SF-36 score			
Physical functioning	71±23	73±24	0.37
Role physical	64±42	77±38	0.022
Bodily pain	78±24	75±28	0.53
General health	52±23	57±25	0.09
Vitality	54±24	59±24	0.12
Social functioning	71±27	84±26	<0.001
Role emotional	66±41	77±38	0.027
Mental health	64±22	73±20	0.003
Overall	65±20	72±20	0.005
Symptom checklist			
Symptom frequency	16±10	13±10	0.008
Symptom severity	12±8	9±7	0.001

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