

The Evaluation Of Quality Of Life In Women With Rheumatoid Arthritis, Osteoarthritis And Fibromyalgia As Compared With Quality Of Life In Normal Women.

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Citation

S Kolahi, A Khbazi, M Hajaliloo, L Namvar, H Farzin. *The Evaluation Of Quality Of Life In Women With Rheumatoid Arthritis, Osteoarthritis And Fibromyalgia As Compared With Quality Of Life In Normal Women..* The Internet Journal of Rheumatology. 2010 Volume 7 Number 1.

Abstract

Background and aim: Musculoskeletal disorders are the most common diseases all over the world. They cause pain, functional impairment, work disability, and affect individuals' quality of life (QOL). Disorders such as fibromyalgia syndrome, rheumatoid arthritis and osteoarthritis constitute a large portion of these conditions. They are very common, especially in middle-aged and older women. Various studies have reported a significant decreased of QOL in these patients comparing with the normal population. This study aims at evaluation the QOL in women with these disorders in comparing with well-matched normal controls. Methods & Materials: In this case-control setting, 400 women aged 35-55 years were enrolled during a 12-month period in Clinics of Rheumatology affiliated to Tabriz University of medical Sciences. They categorized in four equal (100-case) groups: patients with fibromyalgia, rheumatoid arthritis, knee osteoarthritis and healthy controls. The groups were matched for age, body mass index, education and occupation. The Persian version of SF-36 questionnaire was employed to assess the QOL. Different dimensions of QOL were compared between the groups. Results: Physical Functioning, Pain, mental Health, Vitality and physical Health were significantly better in the controls than all three patient groups. Emotional Role, vitality and mental Health in comparing the fibromyalgia and rheumatoid arthritis groups, were significantly worse in the rheumatoid arthritis group. Comparing the fibromyalgia and osteoarthritis groups, all dimensions and groups of QOL were worse in fibromyalgia group. Comparing the rheumatoid arthritis and osteoarthritis groups, Physical functioning, pain and physical health were significantly worse in rheumatoid arthritis group. The intra-group comparison showed that the physical health was worse than the mental health in controls. This was opposite in the rheumatoid arthritis group, with no significant difference in the fibromyalgia and osteoarthritis groups. Conclusion: This study showed that the QOL is negatively influenced by the musculoskeletal disorders. This condition is worse in fibromyalgia and rheumatoid arthritis than the osteoarthritis.

INTRODUCTION

Rheumatic diseases are inflammatory and chronic conditions. These can influence patients and their family, exclusively(1-4).The health situation involved quality of life measurement and evaluation for patients with chronic disease is most important for promising .Individuals have different culture and in different positions, have various definition of pain, fatigue and total posture(5-6). Rheumatoid arthritis is associated with psycho-social dysfunction and increased mortality and press heavy pressure on patient and his family (5).Also, osteoarthritis is a chronic disease that influence quality of life and in multiple studies, have showed its association with depression (7).Several studies have showed quality of life in patients with fibromyalgia is lower than normal groups (8).In

attention to this point that quality of life has essential role in treatment effectiveness, we promise to evaluation quality of life in patients with rheumatoid arthritis ,osteoarthritis and fibromyalgia.

METHODS AND MATERIAL

In this case-control study,400 women (based on pilot studies), grouped healthy ,fibromyalgia, knee osteoarthritis ,rheumatoid arthritis in Tabriz University's Rheumatology Clinics from April 2009 until April 2010. The patients, who have stress accidents in 6 months before, were excluded from study. Rheumatoid arthritis, osteoarthritis and fibromyalgia diagnosis based on American college of rheumatology scales (ACR)(9).Pain severity in osteoarthritis and fibromyalgia based on visual analogue scale(VAS) and

in rheumatoid arthritis based on DAS(10).Four groups have same age, body mass index, education and job. Finally, quality of life evaluated with SF-36 Persian questionnaire by 100 women aged 35-55 of each group. SF-36 evaluated 8 aspects of individual health involved physical activity, physical role or role restriction result as physical problems, pain, mental health, emotional role or role restriction result as emotional problems, vital force and general health. In attention to four subgroup are associated with physical aspect and another four subgroup are associated with mental aspect, we can calculate mean of physical component summary and mental component summary. Two total score, initially involve physical and mental health. Finally, scores of different aspects in this questionnaire conform to zero scale (the lower level of quality) until 100(the highest level of quality). The interpretation and comparison the results of SF-36 based on normal scaling showed mean of each scales is 50 and standard deviation is 10.With increasing score, quality of life is increased (11). The quantity Samples analyzed by One-way ANOVA, Student T-test (Independent Samples) and categorical samples analyzed by chi-Square test or fisher's exact test.

RESULTS

Basic information in 4 groups was abbreviated in table1,2. On this base, the statistically significant different didn't between groups. The quality of life has been shown in table 2. In case group, the mean advantage of physical health significantly higher than mental health($p=0.006$).In fibromyalgia ($p=0.136$)and osteoarthritis($p=0.367$) groups, the mean advantage of physical and mental health haven't statistically significant different, but in rheumatoid arthritis group, the mean advantage of mental health was significant higher than physical health($p=0.002$).The significant reverse correlation were between pain , mental and physical health in all groups($p<0.001$, $r=-0.404$),($p<0.001$, $r=-0.820$),so as with increasing pain score decreased mental and physical health. The Das mean in rheumatoid arthritis groups was $2.9\pm1.4(1.2-5.9)$.The significant reverse correlation were between DAS and physical role($p=0.30$, $r=-0.291$),psychological role($p=0.047$, $r=-0.095$),social function($p=0.039$, $r=-0.245$),physical health($p=0.038$, $r=-0.223$)and mental health($p=0.009$, $r=-0.374$).

Figure 1

Table1: Demographic and total information of evaluated persons

	Healthy persons	Fibromyalgia	Osteoarthritis	Rheumatoid arthritis	P
Age(year)	46.6±6.5	49.9±7.7	48.2±6.9	45.6±7.1	0.565
Weight(Kg)	71.7±11.2	73.4±11.7	73.9±11.7	70.3±13.8	0.138
Height(Cm)	158.2±7.4	157.4±6.4	156.3±5.6	158.3±5.2	0.228

Figure 2

Table2: Several groups scores based on SF-36 questionnaire

	Healthy persons	Fibromyalgia	Osteoarthritis	Rheumatoid arthritis	P
Physical function	72.1±12.7	62.7±13.3	62.9±14.2	52.3±12.1	<0.001
Physical role	75.3±15.1	61±14.2	69.3±18.7	63.8±19.4	<0.001
Psychological role	70.3±11.7	57.1±10.4	67.3±11.2	63.4±13.1	<0.001
Pain	82.4±18.3	57.8±12.7	61±16.2	54±21.9	<0.001
Social role	69.1±13.1	65±10.7	70.4±10.8	69±11.4	0.007
Mental health	67.9±14.4	54.4±14	62.4±12.9	58.8±12	<0.001
General health	68.2±12.3	60.8±10.2	66.5±10.8	64.8±12.1	<0.001
Physical health	74.5±10.9	60.5±9.4	65±12	58.7±12.7	<0.001
Mental health	69.8±11.9	58.5±9.5	66.4±9.6	64±10.2	<0.001

DISCUSSION

In this study, we survey and comparison the quality of life by SF-56 questionnaire in female patients with rheumatoid arthritis, osteoarthritis, fibromyalgia and healthy. Case group had better condition in relation to another groups. Birtane et al (2007) studied 3 groups with rheumatoid arthritis(35), fibromyalgia(30)and healthy cases(30) by SF-36 questionnaire. In all aspects, case group was better than another groups(12).Tander et al (2008) surveyed 3 groups of rheumatoid arthritis(30), fibromyalgia(30) and healthy case(30) by SF-36.All subgroups of quality of life except mental health were better in case group(13).Slatkowsky-Christensen et al(2007)evaluated women with hand osteoarthritis(190),rheumatoid arthritis(194) and healthy (144) by SF-36 questionnaire. Also here, all aspects of quality of life were better in case group (14).Salaffi et al (2009) evaluated 469 patients with rheumatoid arthritis and 1579 healthy person by SF-36 questionnaire. Case group had better conditions (15).Hoffman and et al (2007) had same result in meta-analyze(37 study)of fibromyalgia and healthy patients(16).In comparison with these results, except similarity between this study and Tander et al (13) that hadn't shown any significant difference in mental health component among patient and healthy groups, but healthy persons had better scores of quality of life. We studied several groups with cases that explain any difference between with patients and healthy persons in special aspects of quality of life. For example, cases had significantly better physical role, psychological role, general role and mental role in comparison with fibromyalgia group. Also, rheumatoid arthritis group had bad physical role, psychological role and mental role in comparison with cases.

On the other hand, depression and anxiety may be influence quality of life (17). Comparison case group's physical and mental scores had been shown that mental health score significantly lower than physical score. Its meaning is healthy persons had previously mental disorders. Ozcetin(2007) showed that sever pain in fibromyalgia with influence on mental health result to bad patient function (17). Mental disorders screening would be receive true results in future studies. These patients have lower Quality of life than healthy. This finding is parallel with previous records (18, 19). Fibromyalgia group had worse psychological role and mental role than rheumatoid arthritis. Rheumatoid arthritis group had worse physical function. In Birtane et al study, fibromyalgia group only had mental health worse than rheumatoid arthritis (12), this result was same with our study. In Walker et al (1997) study, all subgroups of quality of life except physical function in patients with fibromyalgia were worse than Rheumatoid arthritis (20). Salaffi et al (2009) survey on 380 patients with fibromyalgia and 693 patients with rheumatoid arthritis showed that rheumatoid group's physical function and fibromyalgia group's mental health were significantly worse (15). In our study, physical function and mental health in rheumatoid arthritis group was worse than fibromyalgia group. Tander et al (2008) study showed that physical role, social function and pain in fibromyalgia group were worse (13), but in our study parameters between 2 groups hadn't any statistically significant different. It seems that physical findings in rheumatoid arthritis could be explaining bad function in these patients (21). Comparison of fibromyalgia and osteoarthritis groups showed that all subgroups of quality of life in fibromyalgia were worse. Also, Yilmaz et al (2008) survey showed this result but pain of osteoarthritis (22) and Ozcetin(2007) showed except physical role, another parameters associated with high quality of life in fibromyalgia was worse than osteoarthritis (17). Our results and followed studies in this ground almost are same, but we should have restriction in comparison with osteoarthritis group, such as what joint has arthritis and its effect on quality of life. For example, quality isn't same in knee, hand and femoral osteoarthritis (23). On the other hand, have been shown that unwanted effects of osteoarthritis on quality of life could be seen over 50 years (24), but we studied younger than 50 years patients. In comparison of 2 groups with rheumatoid arthritis and osteoarthritis were pain, physical function and health worse in rheumatoid arthritis. Other parameters associated with quality of life had no statistically significant difference. In Slatkowsky-Christensen et al

(2007) studied quality of life by Sf-36 questionnaire in two groups with hand osteoarthritis (190 patients) and rheumatoid arthritis (194 patients). On this base, physical health and function in rheumatoid arthritis and mental health in osteoarthritis were worse (14). In other study by Slatkowsky-Christensen et al (2009), physical function in rheumatoid arthritis and pain in osteoarthritis (25). These results were same with our findings.

CONCLUSION

Physical function, pain, mental health and physical health in case group were significantly better than 3 patient groups. In attention to these results, several aspects of quality of life in osteoarthritis, rheumatoid arthritis and fibromyalgia decreased. Overall, in side of physician and general treatment, attending to interventional process in increasing quality of life, especially for patients with fibromyalgia and rheumatoid arthritis are important. We suggest to survey mental parameters role such as depression and anxiety in future studies for comparison of quality of life.

References

1. Van Houdenhove B, Luyten P. (2006). Stress, depression and fibromyalgia. *Acta Neurol Belg*, 106(4), 149-56.
2. Guven AZ, Kul Panza E, Gunduz OH. (2005). Depression and psychosocial factors in Turkish women with fibromyalgia syndrome. *Eura Medicophys*, 41(4), 309-13.
3. Thieme K, Turk DC, Flor H. (2004). Comorbid depression and anxiety in fibromyalgia syndrome: relationship to somatic and psychosocial variables. *Psychosom Med*, 66(6), 837-44.
4. Martens MP, Parker JC, Smarr KL, Hewett JE, Slaughter JR, Walker SE. (2003). Assessment of depression in rheumatoid arthritis : a modified version of the center for epidemiologic studies depression scale. *Arthritis Rheum*, 49(4), 549-55.
5. Mielenz T, Jackson E. (2006). Health and Quality of life outcomes. *Health*, 4, 66.
6. Pincus T. (2005). Rheumatology function tests: Quantitative physical measure to monitor morbidity and predict mortality in patients with rheumatic disease. *Clin Exp Rheumatol*, 23(39), S85-9.
7. Visser H, Cessie S, Vos K, Breedveld FC, Hazes JM. (2002). How to diagnose rheumatoid arthritis early: a prediction model for persistent (erosive) arthritis. *Arthritis Rheum*, 46(2), 357-65.
8. Berthelot JM, Saraux A, Maugars Y, Prost A, Le Goff P. (2001). The nosology-taxonomy of recent-onset arthritis: the experience of early-arthritis clinics. *Semin Arthritis Rheum*, 30(5), 354-65.
9. American College of Rheumatology. (2002). Guidelines for the management of rheumatoid arthritis: 2002 Update. *Arthritis Rheum*, 46, 328-346.
10. Koopman WJ, Moreland LW (2005). *Arthritis and Allied Conditions*, 15th ed. Lippincott William & Wilkins, Philadelphia, 2199.
11. Lorig KR, Sobel DS, Stewart AL, Brown Jr BW, Ritter PL, Gonzalez VM, et al. (1999). Evidence suggesting that a chronic disease self-management program can improve

health status while reducing utilization and costs: a randomized trial. *Med Care*, 37(1), 5-14.

12. Birtane M, Uzunca K, Taştekin N, Tuna H. (2007). The evaluation of quality of life in fibromyalgia syndrome: a comparison with rheumatoid arthritis by using SF-36 Health Survey. *Clin Rheumatol*, 26(5), 679-84.

13. Tander B, Cengiz K, Alaylı G, İlhanlı I, Canbaz S, Canturk F. (2008). A comparative evaluation of health related quality of life and depression in patients with fibromyalgia syndrome and rheumatoid arthritis. *Rheumatol Int*, 28(9):859-65.

14. Slatkowsky-Christensen B, Mowinckel P, Loge JH, Kvien TK. (2007). Health-related quality of life in women with symptomatic hand osteoarthritis: a comparison with rheumatoid arthritis patients, healthy controls, and normative data. *Arthritis Rheum*, 57(8), 1404-9.

15. Salaffi F, Carotti M, Gasparini S, Intorcia M, Grassi W. (2009). The health-related quality of life in rheumatoid arthritis, ankylosing spondylitis, and psoriatic arthritis: a comparison with a selected sample of healthy people. *Health Qual Life Outcomes*, 7, 25.

16. Hoffman DL, Dukes EM. (2008). The health status burden of people with fibromyalgia: a review of studies that assessed health status with the SF-36 or the SF-12. *Int J Clin Pract*, 62(1), 115-26.

17. Özçetin A, Ataoglu S, Kocer E, Yazıcı S, Yıldız O, Ataoglu A, et al. (2007). Effects of depression and anxiety on quality of life of patients with rheumatoid arthritis, knee osteoarthritis and fibromyalgia syndrome. *West Indian Med J*, 56(2), 122-9.

18. Woolf AD. (2000). The Bone and Joint Decade

2000–2010. *Ann Rheum Dis*, 59(2), 81–82

19. Alonso J, Ferrer M, Gandek B, Ware JE Jr, Aaronson NK, Mosconi P, et al. (2004). Health-related quality of life associated with chronic conditions in eight countries: results from the International Quality of Life Assessment (IQOLA) Project. *Qual Life Res*, 13(2), 283-98.

20. Walker EA, Keegan D, Gardner G, Sullivan M, Katon WJ, Bernstein D. (1997). Psychosocial factors in fibromyalgia compared with rheumatoid arthritis: I. Psychiatric diagnoses and functional disability. *Psychosom Med*, 59, 565–571.

21. Martinez JE, Ferraz MB, Sato EI, Atra E. (1995). Fibromyalgia versus rheumatoid arthritis: a longitudinal comparison of the quality of life. *J Rheumatol*, 22, 270–274

22. Yilmaz F, Sahin F, Ergoz E, Deniz E, Ercalik C, Yucel SD, et al. (2008). Quality of life assessments with SF 36 in different musculoskeletal diseases. *Clin Rheumatol*, 27(3), 327-32.

23. Salaffi F, Carotti M, Stancati A, Grassi W. (2005). Health-related quality of life in older adults with symptomatic hip and knee osteoarthritis: a comparison with matched healthy controls. *Aging Clin Exp Res*, 17(4), 255-63.

24. Brooks PM. (2002). Impact of osteoarthritis on individuals and society: how much disability? Social consequences and health economic implications. *Curr Opin Rheumatol*, 14, 573–7.

25. Slatkowsky-Christensen B, Mowinckel P, Kvien TK. (2009). Health status and perception of pain: a comparative study between female patients with hand osteoarthritis and rheumatoid arthritis. *Scand J Rheumatol*, 38(5), 342-8.

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