

Evaluation of quality of life of elderly patients submitted to hip replacement. Case reports*

Avaliação da qualidade de vida em idosos submetidos à artroplastia de quadril. Relato de casos

Elisiane Lorenzini¹, Jones Melere², Karen Bazzo³, Eveline Franco da Silva⁴

* Received from the Nursing Course, University Nossa Senhora de Fátima (FÁTIMA). Caxias do Sul, RS.

ABSTRACT

BACKGROUND AND OBJECTIVES: Understanding the quality of life (QL) of a group of people in specific situations favors the development of health care strategies and actions. Total hip replacement (THR) is a surgical procedure characterized by hip joint replacement to recover functions of a faulty joint, with the implant of prosthesis providing free movements and relieving pain, allowing patients' early return to their activities with significant improvement in QL. This study the evaluated QL of elderly patients submitted to THR.

CASE REPORTS: Ten elderly patients submitted to THR were evaluated in the 30th postoperative day by the Short-Form 36 (SF-36) tool. It was observed that QL was significantly better ($p < 0.05$) in terms of mental health, vitality, general health status and social aspects as compared to other domains. There has been significance in physical aspects, emotional aspects and functional capacity. A significant and positive correlation ($r = 0.634$; $p < 0.05$) was detected between age and emotional aspects.

CONCLUSION: THR has influenced the QL of the elderly, especially with regard to emotional aspects.

Keywords: Elderly, Hip replacement, Quality of life.

RESUMO

JUSTIFICATIVA E OBJETIVOS: Conhecer a qualidade de vida (QV) de um grupo de indivíduos em determinada situação, favorece a construção de estratégias e ações de cuidado. A artroplastia total de quadril (ATQ) é um procedimento cirúrgico, caracterizado pela substituição da articulação do quadril que visa recuperar as funções de uma articulação defeituosa, com a implantação de próteses proporcionando movimentos livres e melhora da dor, permitindo ao paciente um retorno precoce às suas atividades e com expressiva melhora em sua QV. Este estudo avaliou a QV relacionada à saúde de idosos submetidos à ATQ.

RELATO DOS CASOS: Foram avaliados 10 pacientes idosos submetidos à ATQ no 30º dia de pós-operatório por meio do instrumento *Short-Form 36* (SF-36). Verificou-se que a QV mostrou-se significativamente melhor ($p < 0,05$) nos domínios saúde mental, vitalidade, estado geral da saúde e aspectos sociais quando comparados aos demais domínios. Houve significância nos domínios, aspectos físicos, aspectos emocionais e capacidade funcional. Foi detectada correlação significativa e positiva ($r = 0,634$; $p < 0,05$) entre a idade e o domínio aspectos emocionais.

CONCLUSÃO: A ATQ influenciou a QV dos idosos, especialmente com relação aos aspectos emocionais.

Descritores: Artroplastia de quadril, Idoso, Qualidade de vida.

INTRODUCTION

Total hip replacement (THR) is a surgical procedure characterized by the replacement of hip joint to recover functions of a failed joint with the implant of prosthesis, allowing free movements and pain relief, providing patients with early return to their activities with significant improvement in their quality of life (QL)¹.

QL has been the focus of health assistance for a long time. The World Health Organization (WHO) defines QL as "the perception of individuals of their position in life in the context of culture and value systems they live in, and with regard to their objectives, expectations, standards and concerns"^{2,3}. It is understood that QL promotion refers to actions taken to improve individual life standards, actions aimed at the psychosocial sphere, thus promoting better sensations of well-being and personal achievement. Knowing the QL of a group of individuals in a certain situation favors the development of care strategies and actions.

1. Nurse. Master in Health Sciences, University Foundation of Cardiology of Rio Grande do Sul (IC/FUC-RS). Professor of the Nursing Course, University Nossa Senhora de Fátima (FÁTIMA). Caxias do Sul, RS, Brazil.

2. Graduated in Nursing. Beneficent Hospital São Pedro. Garibaldi, RS, Brazil. Bacharel em Enfermagem. Hospital Beneficente São Pedro. Garibaldi, RS, Brasil.

3. Biomedical. Master in Health Sciences with emphasis in Biochemical and Molecular Pharmacology, Catholic University of Rio Grande do Sul. Professor of the Nursing Course, University Nossa Senhora de Fátima (FÁTIMA). Caxias do Sul, RS, Brazil.

4. Obstetrician Nurse. Master Student of the Post-Graduation Program in Nursing, Federal University of Rio Grande do Sul (UFRGS). Professor of the Nursing Course, University Nossa Senhora de Fátima (FÁTIMA). Caxias do Sul, RS, Brazil.

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Correspondence to:

Elisiane Lorenzini

Rua Alexandre Fleming, 454

95041-520 Caxias do Sul, RS.

Phone/Fax: (54) 3535-7300

E-mail: elisiane.lorenzini@fatimaeducacao.com.br

The Short-Form 36 (SF-36) questionnaire is used to evaluate health-related QL by the broad description of psychometric properties, because it is made up of 11 questions and 36 items evaluating functional capacity, physical aspects, emotional aspects, pain intensity, general health status, vitality, social aspects and mental health. This tool is validated in Brazil⁴.

Considering that THR is a major invasive surgery involving risks, such as the possibility of traumatic complications which may impair QL of patients, this study aimed at evaluating health-related QL of 10 elderly patients submitted to THR in a charity hospital of the Northeastern region of Rio Grande do Sul.

CASE REPORTS

Participated in this study 10 patients of both genders, aged 60 years or above, who were in the 30th postoperative day of THR to treat hip fracture, and able to fill the SF-36 questionnaire.

Distribution with regard to gender was 80.0% of males and 20.0% of females. Mean age was 70.8 ± 6.5 years, varying between 64 and 83 years of age.

With regard to SF-36 dimensions (Table 1), it was observed that for functional capacity (FC), mean was 30.0 ± 21.1 with minimum score of 10.0 and maximum of 65.0. For physical aspects (PA), scores have varied between 0.0 and 25.0, with mean of 10.0 ± 12.9 . In the pain domain, maximum score was 84.0 and minimum was 31.0, with estimated mean of 49.6 ± 15.8 . For general health status (GHS), mean was 65.3 ± 27.5 with variation amplitude of 22.0 to 97.0. With regard to vitality domain (VIT) minimum and maximum scores were 35.0 and 100.0 with mean of 77.5 ± 21.1 .

With regard to social aspects (SA), mean was 30.0 with minimum of 37.5 and maximum of 75.0. As to emotional aspects (EA), mean was 30.0 ± 39.9 , with variation amplitude from 0.0 to 100.0. Mental health (MH) had mean score of 78.0 ± 17.0 , with minimum of 48.0 and maximum of 96.0.

According to the Analysis of Variance for repeated measures, it was observed that QL was significantly better in MH (78.0 ± 17.1), VIT (75.5 ± 21.1), GHS (65.3 ± 27.5) and SA (60.0 ± 11.5) domains as compared to remaining domains. This way, QL was impaired in PA (10.0 ± 12.9), EA (30.0 ± 39.9) and FC (30.0 ± 21.1).

Spearman correlation analysis (Graphs 1 and 2) was used to evaluate the relationship between age and QL, where we tried to identify whether domain scores were influenced by age. According to table 2, there has been a significant and positive correlation ($r = 0.634$; $p < 0.05$) between age and EA, indicating that elderly people with more advanced ages are correlated to also higher EA scores or vice-versa: elderly people with lower ages had association with also lower scores in the EA domain. The correlation between age and other SF-36 domains was not significant for the studied group, pointing to a relation of independence among compared variables.

Data were analyzed by Chi-square test and Analysis of Variance for repeated measures – Post Hoc Bonferroni, using the SPSS 17.0 software (Statistical Package to Social Sciences for Windows - SPSS Inc., Chicago, IL, USA, 2008), with significance level (α) of 5%.

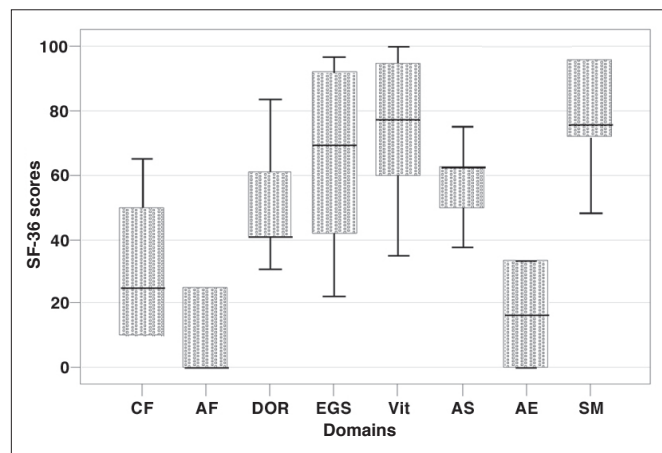
This study was approved by the Research Ethics Committee of the Cultural and Scientific Association Nossa Senhora de Fátima, opinion CEP 066/11 (CAAE: 0066.0.401.000-2011).

Table 1 – Mean, standard deviation, median and amplitude for age.

SF-36 domains	Estimates (n = 10)					p §
	Mean	Standard Deviation	Median	Minimum	Maximum	
FC	30.0b	21.1	25.0	10.0	65.0	F _{calc} = 19.932 p = 0.002
PA	10.0c	12.9	0.0	0.0	25.0	
PAIN	49.6b	15.8	41.0	31.0	84.0	
GHS	65.3a	27.5	69.5	22.0	97.0	
VIT	75.5a	21.1	77.5	35.0	100.0	
AS	60.0a	11.5	62.5	37.5	75.0	
EA	30.0b	39.9	16.7	0.0	100.0	
MH	78.0a	17.1	76.0	48.0	96.0	

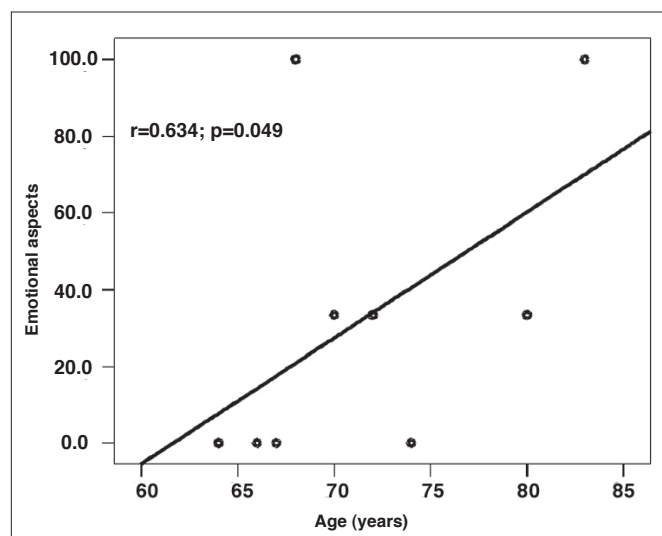
FC = functional capacity; PA = physical aspects; GHS = general health status; VIT = vitality; AS = social aspects; EA = emotional aspects; MH = mental health.

§ Dependent comparison among domains by the Repeated Measures Analysis (Mauchly $p = 0.192$; Huynh Feldt correction $p = 0.002$) – Post Hoc Bonferroni where means followed by equal letters are not different at 5% ($p < 0.05$).



Graph 1 – Observed scores (Box Plot) according to SF-36 domains.

FC = functional capacity; PA = physical aspects; GHS = general health status; VIT = vitality; AS = social aspects; EA = emotional aspects; MH = mental health.



Graph 2 – Dispersions between age in years and SF-36 emotional aspects domain.

DISCUSSION

This study has shown that post-THR QL was impaired in the PA, EA and FC domains. A study carried out in Australia evaluating QL with SF-36 of 62 patients submitted to total hip replacement three years after the procedure has not shown significant differences, however general health has decreased and PA of females was lower as compared to PA reported by the healthy population⁵.

In our case reports, QL was impaired in the PA domain. In the active population aged between 55 and 64 years, mean of the domain related to physical problems was 55.66 ± 26.25 ⁶ showing worse PA as compared to the healthy population¹¹, which is in line with the literature.

A study comparing gait parameters and QL by the Quality of

Life Questionnaire (QOL) of THR and healthy individuals aged between 65 and 85 years, has shown lower FC as compared to healthy individuals; the relationship was inverse when correlated to body pain intensity⁷. In our case reports, QL was impaired in the FC domain.

A systematic review⁸ where mental health of patients was evaluated by SF-36 or SF-32, has shown correlation between psychological factors and QL of patients submitted to knee replacement, however for THR patients this correlation was not clearly established. Our report is in line with literature data.

The reasons why patients had impaired EA are not clear. A multi-center study carried out from 1999 to 2002 has investigated pre-operative psychological stress in patients to be submitted to THR and its influence in postoperative satisfaction, however no correlation was found between preoperative stress and postoperative satisfaction, confirming that preoperative stress is not correlated to patients' postoperative performance^{9,10}.

Our report has evidenced that THR influences QL of patients, especially with regard to EA and its correlation with patients' age, however the reasons for this correlation are not clear according to existing literature data. Further data are needed about QL of post-THR patients to explain and identify factors which may impair QL of those individuals, as well as their reasons and consequences.

CONCLUSION

QL was impaired in the PA domains, with significant and positive correlation between age and EA domain, indicating that elderly people with more advanced ages are correlated with also higher EA scores.

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