

PAIN IS ASSOCIATED WITH IMPAIRED PHYSICAL-RELATED HEALTH IN PATIENTS WITH CARDIAC DISEASE



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INTRODUCTION

Health-Related Quality of Life (HRQoL) is often impaired in patients with cardiac disease, while the extent of impairment depends on the cardiac diagnose and individual characteristics. The majority of these patients suffer from cardiac and non-cardiac, physical pain, which is often underestimated in daily practice. Pain can be a major factor influencing mental as well as physical health, with negative impact on HRQoL.

PURPOSE

The purpose of this study was to study the relationship of pain on HRQoL in patients with a broad spectrum of cardiac diseases.

METHODS

Six databases with data of cardiac patients were combined. The final database consists of 3409 Swedish patients with a primary cardiac diagnoses including heart failure, supraventricular arrhythmia, congenital heart disease and coronary artery disease. HRQoL and pain were assessed by the 36-Item Short-Form Survey (SF-36v1). Demographic characteristics were described with mean \pm SD and continuous variables were examined with t test or Mann-Whitney U test, as appropriate. Bivariate correlation was performed to investigate possible associations between HRQoL and age per diagnose group, and expressed in Spearman's, rank correlation coefficient. Stepwise multiple linear regression analyses was used to detect independent variables that can predict changes in the SF-36 subscales. P-values $<$ 0.05 were considered statistically significant.

RESULTS – BASELINE CHARACTERISTICS

The mean age was 66 ± 12 years, with congenital heart disease patients being significantly younger. There were 2230 male patients (65%). Overall score on Bodily Pain was 78 (IQR 45–100). Congenital heart disease patients scored highest on Bodily Pain (representing good HRQoL), while heart failure patients had the lowest scores herein.

RESULTS – MAIN OUTCOMES

Lower scores on the physical related subscales were found in patients who had lower scores on Bodily Pain e.g. patients experienced more pain (figure 1). Within patient groups (based on diagnoses) however, all subscales correlated (0.187-0.699) significantly with each other. In the group with coronary artery disease patients the strongest correlations were found between Bodily Pain and the physical related scales Physical Functioning and Role Physical.

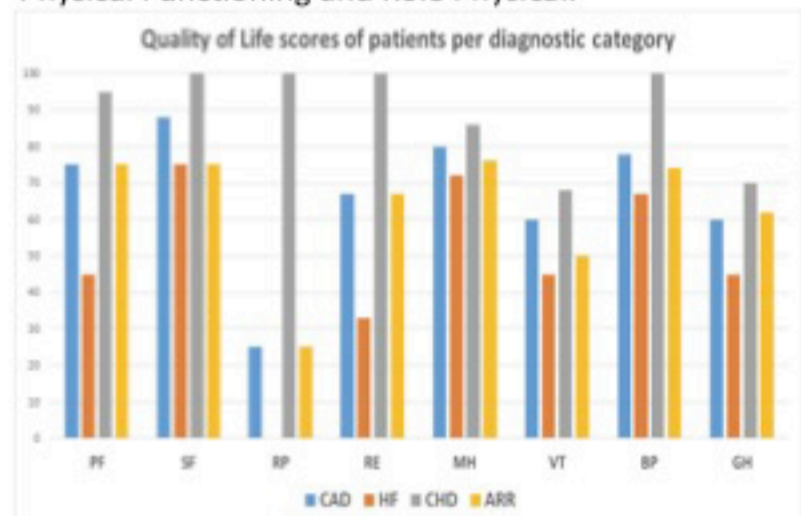


Figure 1 Quality of Life scores on SF 36 subscales per diagnostic category Physical Functioning (PF), Social Functioning (SF) Role Physical (RP), Role Emotional (RE), Mental Health (MH), Vitality (VT), Bodily Pain (BP), General Health (GH)

The regression analyses demonstrated the predictive influence of the cardiac diagnose on Vitality (R-square .026) and Social Functioning (R-square .011), indicating a predictive value on the mental related subscales ($p <$ 0.001). Also, age is considered of predictive value mainly on the physical related subscales, demonstrating that a younger age predicts better scores on Physical Functioning (R .110), $P <$ 0.001. The predictive value of gender as an independent variable is relatively low, with the highest predictive value in Mental Health (R .015) and Bodily Pain (R .004), $P <$ 0.001.

CONCLUSION

- Pain is associated with physical impairment in cardiac patients with age being of important predictive value.
- The cardiac diagnose might be of predictive value on mental impairment.
- Therefore, pain might lead to physical as well as mental related QoL.

