The Use of The Quality of Life in Cardiovascular Surgery (QLCS) Questionnaire in Patients Submitted to Coronary-Artery Bypass Grafting: Validation, Reproduciblity and Quality of Life Analysis at the First Year of Follow-Up

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Background

- Quality of Life (QoL) is becoming a fundamental topic for medicine

- Improving QoL is one of the main objectives for cardiovascular surgery

- QLCS is a new questionnaire, created specifically for postoperative cardiovascular surgery, easy to apply, which can be performed by telephone contact

- The objectives of the study are to validate the QLCS and to observe the evolution of QoL in the first year of postoperative follow-up of patients submitted to CABG

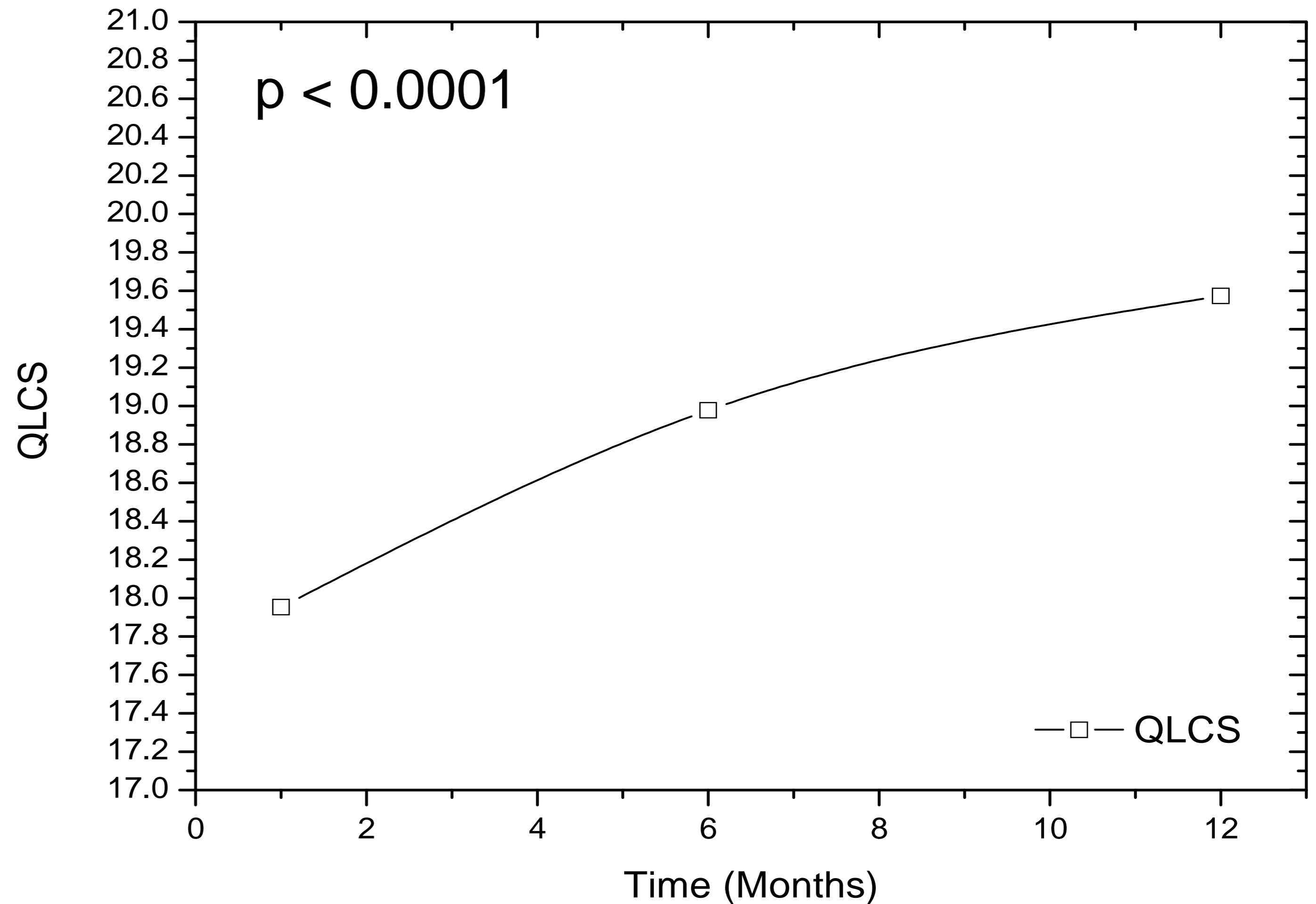| This questionnaire asks for your opinion about your health and how you feel and about your ability to perform your daily activities in the last 30 days, 6 months, 12 months and annually. Answer the questions as follows:				
1-Too Bad	2- Bad	3- Good	4- Very Good	5- Great
1) How is the patient's performance in daily activities / work / school?				
2) How is the patient's health after surgery?				
3) How is the patient's physical capacity after surgery?				
4) From the emotional point of view how the patient is feeling?				
5) In relationship with your family members how is the patient feeling?				
Total:_____ / 25 points				

Patients and Methods

- Prospective Cohort

- 360 patients submitted to CABG

- July 2016 to June 2017

- QLCS (30 days, 6 months, 1 year)

- Internal Consistency: Cronbach alpha at 30 days

- Test-retest reproducibility: Kappa index, correlation coefficient of concordance (CCC) and accuracy (Cb)

- Non-parametric ANOVA: analysis of repeated measures

- The level of significance was 5%

	N (%)
Male	259 (71.94)
Alcoholic	13 (3.61)
Systemic Arterial Hypertension	307 (85.28)
Dyslipidemia	219 (60.83)
Diabetes	190 (52.78)
History of Smoking	192 (53.33)
Chronic Obstructive Pulmonary Disease	15 (4.17)
Peripheral Arterial Obstructive Disease	18 (5.00)
Chronic Kidney Disease	32 (8.89)
Stroke	16 (4.44)
Cardiorespiratory Arrest	3 (0.83)
Acute Myocardial Infarction	188 (52.22)
Arrhythmia	10 (2.78)
	Mean (SD)
Age (Years)	62.90 (8.72)
BMI (Kg/m²)	28.13 (4.35)
Angina Class (CCS)	2.22 (1.14)
Functional Class (NYHA)	1.49 (0.66)
Euroscore 1	2.83 (2.18)
Euroscore 2	1.14 (0.65)

Results

- The Cronbach's alpha was 0.82, demonstrating adequate internal consistency

- The Kappa index for questions ranged from 0.58 to 0.78, which ensures a moderate reproducibility, at least

- The CCC was 0.93 and the Cb was 0.99, showing good precision and accuracy

- There was a progressive improvement in QoL over the first year of follow-up ($p < 0.0001$)

QLCS	30 days	6 months	1 year
Mean	17.69	18.82	19.52
SD	3.92	3.37	3.39

Figure 1: *The QLCS results in patients submitted to CABG at the first year of follow-up.*

Conclusion

- Improving QoL is one of the main objectives for cardiovascular surgery

- The QLCS proved to be a good questionnaire for evaluation of QoL in patients subjected to CABG, with adequate internal consistency, and at least moderate reproducibility

- Its use throughout this first postoperative year revealed a progressive and significant improvement in the QoL of patients submitted to CABG ($p < 0.0001$)