

Introduction

Cardiovascular disease is the leading cause of death in Colombia's general population (83.7 ischemic heart disease deaths per 100,000 population and cardiovascular disease 42.6) and anxiety and depression disorders are the most common mental illness in America. There is a relationship between anxiety, depression and poor quality of life, impaired functional status and recurrence of cardiovascular events, hospitalization and death in patients with cardiovascular disease. The cardiac rehabilitation programs have reduced cardiovascular risk, the event rate, promotes healthy behaviors, active lifestyles and improve anxiety and depression index.

Objective

Determine the effect of a cardiac rehabilitation program on anxiety and depression disorders in patients with cardiovascular disease (surgical and/or medical)

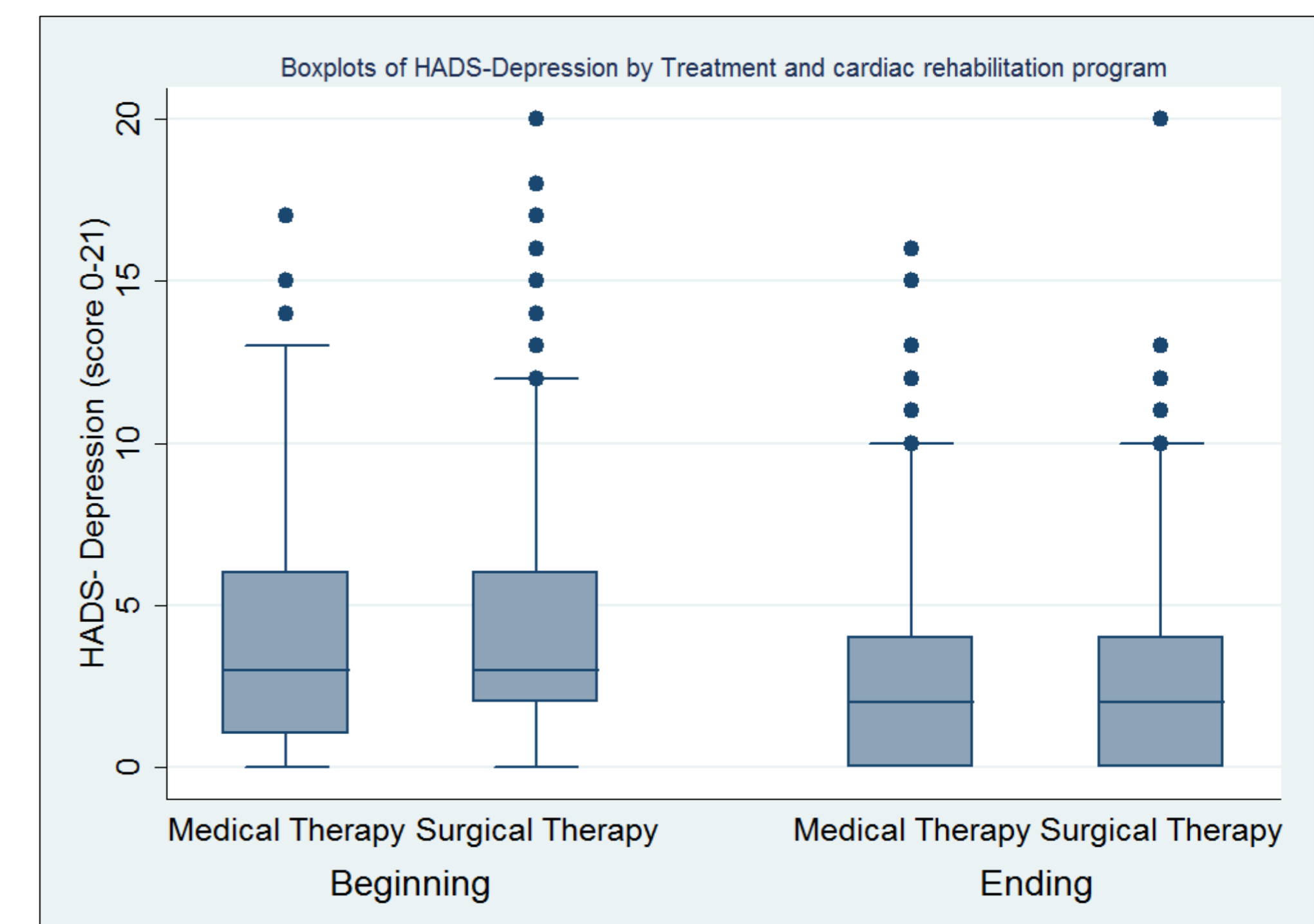
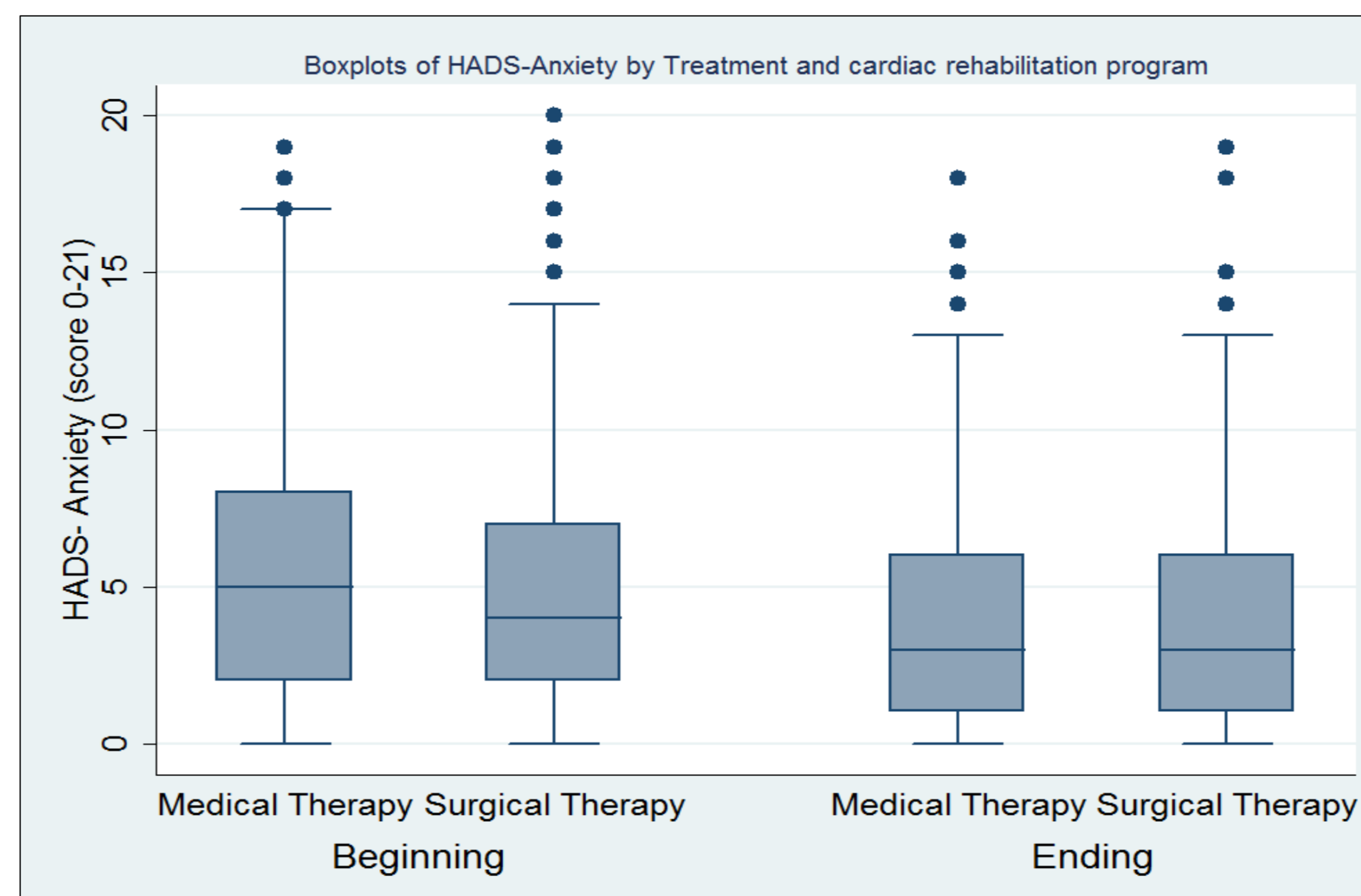
Methods

Retrospective study of patients with cardiovascular disease with medical or surgical management between January 2005 to December 2013. Adults screened for anxiety and depression with the Anxiety Hospital and Depression Scale (HADS) at admission and at the end of the program were included. Cardiac transplant patients were excluded. Demographic variables stratified by medical or surgical management and scales of HADS were compared for each group at the entry and at the end of the RHC. The study was approved by the Institutional Review Board.

Results

2791 patients were admitted to rehabilitation cardiac program between January 2005 to December 2013. Of these 1219 have HADS measure at admission and end of RHC. On admission, the median HADS-Anxiety was 3 and 11% have anxiety. The median HADS-Depression was 3 and 5.71% have depression. 37 patients have anxiety with depression. At the end of the RHC there was improvement in anxiety score (mean 1.875 95% CI 1.6 - 2.14 p = 0.00) and depression (mean 1.46 95% CI 1.2 - 1.72 p = 0,00). The difference of surgical management in anxiety was 1.48 95% CI 1.18 - 1.78 p = 0.001 and depression 1.83 95% CI 1.53 to 2.12 p = 0.001.

| | ALL PATIENTS (n=1219) n (%) | MEDICAL TREATMENT (n=654) n (%) | SURGICAL TREATMENT (n=565) n (%) | p |
|--------------------------------|--------------------------------|------------------------------------|-------------------------------------|------|
| Age* | 61 (52-69) | 62 (53-71) | 60 (52-68) | 0 |
| Sex | 833 (68.28) | 453 (69.05) | 380 (67.38) | 0.29 |
| BMI (kg/m2)* | 25.80 (23.38-28.33) | 26.54 (24.20-2.81) | 24.80 (22.65-27.34) | 0 |
| Weight | | | | |
| Normal | 487 (39.92) | 204 (31.10) | 283 (50.18) | 0 |
| Underweight | 23 (1.89) | 8 (1.22) | 15 (2.66) | |
| Overweight | 539 (44.18) | 334 (50.91) | 205 (36.35) | |
| Obesity | 171 (14.02) | 110 (16.769) | 61 (10.82) | |
| CHD | 517 (42.34) | 322 (49.49) | 195 (34.51) | 0 |
| Dislipidemia | 662 (54.26) | 364 (55.49) | 298 (52.84) | 0.35 |
| Hypercolesterolemi | 683 (55.98) | 384 (58.54) | 299 (53.01) | 0.05 |
| a | 660 (54.10) | 369 (56.25) | 291 (51.60) | 0.1 |
| Diabetes | 244 (20.00) | 146 (22.26) | 98 (17.38) | 0.03 |
| Hypertension | 668 (54.71) | 380 (57.93) | 288 (50.97) | 0.02 |
| Cigarette smoking | 373 (30.57) | 218 (33.23) | 155 (27.48) | 0.03 |
| Sedentarismo | 743 (61.15) | 403 (61.72) | 340 (60.50) | 0.66 |
| Cardiac findings* | | | | |
| HDL(mg/dl) | 40 (34-47.3) | 40 (34-48) | 41 (34-46) | 0.94 |
| LDL(mg/dl) | 90.7 (68.5-119) | 87 (65.5-111.5) | 98 (75-126.6) | 0 |
| HbA1c (%) | 6.6 (5.9-6.9) | 6.3 (5.9-6.8) | 6.7 (6.1-7.7) | 0.4 |
| Triglycerides | 141 (104-191) | 139 (103-186) | 147 (108-203) | 0.11 |
| Glucose(mg/dl) | 96 (89-109) | 97 (90-111) | 95 (87-105) | 0.1 |
| Total Cholesterol(mg/dl) | 166 (137-199) | 161 (133-193) | 172 (144-205) | 0 |
| Systolic blood pressure(mmHg) | 111 (105-120) | 114 (105-124) | 110 (104-120) | 0.01 |
| Dyastolic blood pressure(mmHg) | 70 (61-76) | 70 (60-74) | 70 (63-78) | 0 |
| Heart rate | 71 (61-82) | 66 (59-75) | 79 (67-89) | 0 |



| Changes on anxiety and depression HADS index | | | | |
|--|---------------------|----------------------|-----------------------|------|
| Variable | All patients (1219) | Medical therapy(654) | Surgical Therapy(565) | p |
| HADS-A Beginning | 5(2-8) | 5(2-8) | 4(2-7) | 0.00 |
| HADS-D Beginning | 3(1-6) | 3(1-6) | 3(2-6) | 0.39 |
| HADS-A Final | 3(1-6) | 3(1-6) | 3(1-6) | 0.13 |
| HADS-D Final | 2(0-4) | 2(0-4) | 2(0-4) | 0.78 |

*values are expressed in median (interquartile range), BMI: Body Mass Index (kg/m²), HADS-A: Anxiety Hospital and Depression Scale – Anxiety, HADS-D Depression.

Conclusions

In addition to the improvement of cardiovascular risks factors and fitness, cardiac rehabilitation programs improve anxiety and depression index on patients at the end of therapy.

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