Comparison of Framingham and REGICOR scales for calculating cardiovascular risk in a cohort of patients with morbid obesity

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INTRODUCTION

✓ The prevalence of obesity has increased, reaching epidemic proportions. Framingham and REGICOR scales predict the likelihood of developing a coronary event in the next 10 years.

OBJECTIVES

✓The aim of this study was to assess the concordance of these scales in the stratification of cardiovascular risk (CVR) in a cohort of patients with morbid obesity
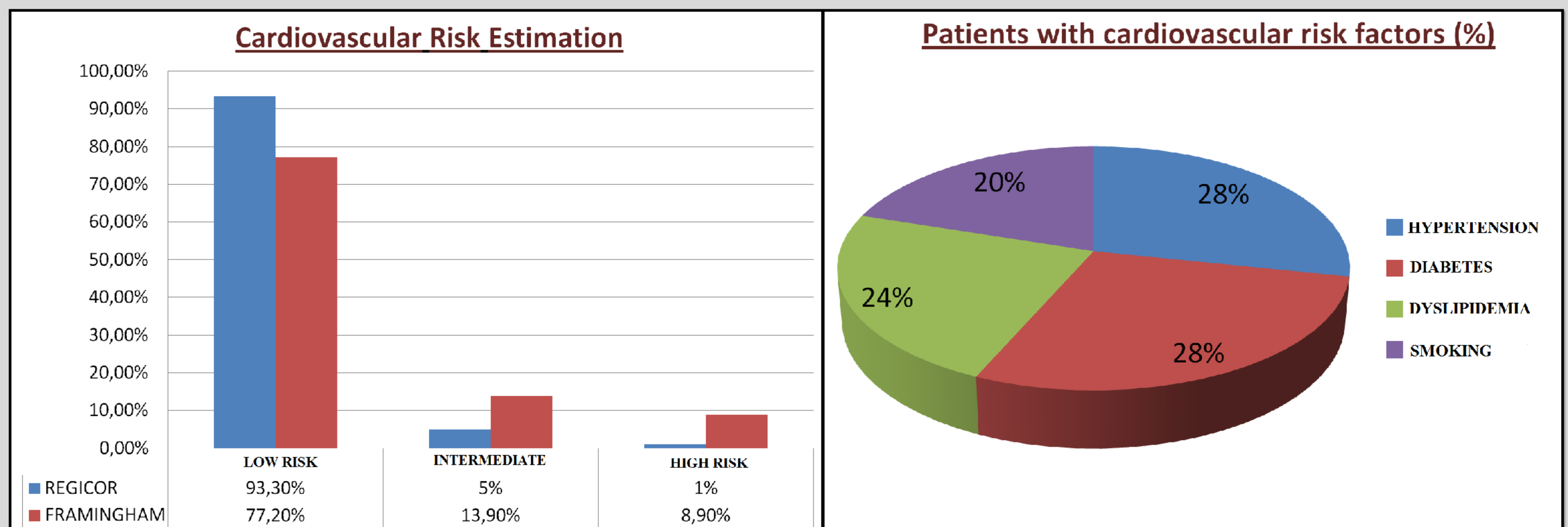
METHODS

✓ Cross-sectional study including a sample of patients with morbid obesity evaluated from 2005 to 2012.

✓ The estimation of CVR at 10 years was determined according to the Framingham-Wilson Score and its adaptation to Mediterranean populations (REGICOR scale). These scales include the following variables: age, sex, total cholesterol levels, HDL cholesterol, systolic blood pressure, presence of diabetes (T2DM) and smoking.

✓ Depending on the results, they were classified into 3 categories: low risk (<10%), intermediate (10-20%) and high (> 20%).

RESULTS

✓ A total of 211 patients were included. The mean age was 37.9 $\pm$ 9.8 years and 157 were female (74%). The mean BMI was 51.13 $\pm$ 7.11 kg/m2. Regarding cardiovascular risk factors, 75 (35.7%) patients had hypertension, 75 (35.7%) dyslipidemia, 62 (29.5%) smoking and 53 (25.2%) T2DM. Total cholesterol mean levels were 197.27 $\pm$ 38.85 mg/dl and HDL 44.19 $\pm$ 11.53 mg/dl

✓ The results for the estimation of CVR with the REGICOR scale were: 93.9% of patients with low risk, 5% intermediate and 1% high risk, while those with the Framingham score were: 77.2% low risk, 13.9% intermediate and 8.9% high. .

✓ The mean CVR estimation was 3.08 $\pm$ 2.85 with REGICOR versus 6.16$\pm$ 7.02% with Framingham (p <0.001). The Kappa index of agreement between the scales was 0.231.

Cardiovascular Risk Estimation

	LOW RISK	INTERMEDIATE	HIGH RISK
REGICOR	93,30%	5%	1%
FRAMINGHAM	77,20%	13,90%	8,90%

Patients with cardiovascular risk factors (%)

- HYPERTENSION 28%
- DIABETES 28%
- DYSLIPIDEMIA 24%
- SMOKING 20%

CONCLUSIONS

In our series, the CVR estimated by Frammigham score was superior to that obtained by REGICOR scale. A positive correlation between both scales was obtained but with a fair agreement. These results support the importance of CVR scales adjusted for each population.

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