**Poor glycemic control increases the risk of recurrent atrial arrhythmia and cardiovascular hospitalizations among morbidly obese patients undergoing atrial fibrillation ablation**

**Background:**

Lifestyle modifications can reduce atrial fibrillation (AF) burden in obese patients, but delaying catheter ablation (CA) may negate this benefit. We examined the effect of lifestyle modifications and the timing of AF CA on morbidly obese patients.

**Methods:**

This retrospective study included 217 patients with a body mass index (BMI) ≥35 kg/m2 undergoing AF CA. Modifiable risks were examined, including the time from AF diagnosis to CA, fluctuation of BMI >5% or an increase >3% prior to CA, blood pressure >130/80 mmHg, obstructive sleep apnea with CPAP noncompliance, hyperlipidemia without a statin, tobacco use, excessive alcohol use, and diabetes mellitus with hemoglobin A1c (HbA1c) >6.5%. The primary outcome was a composite of recurrent atrial arrhythmias and cardiovascular (CV) hospitalizations following CA. A multivariate analysis adjusting for age, gender and modifiable risks was performed.

**Results:**

The mean age was 61±9 years old, 58% were female and 45% had persistent AF. Modifiable risk factors ranged from 2.7% with excessive alcohol use to 67.3% with delayed CA. The median time from AF diagnosis to CA was 1.3 years. During a mean of 2.9 years after CA, 136 (62.7%) patients met the primary outcome. Only HbA1c >6.5% was an independent risk factor with adjusted hazard ratio of 1.57, 95% confidence interval 1.02-2.36, P=0.04; delayed CA did not alter outcomes, Figure 1. There was no interaction between time of CA and HbA1c >6.5% (P=0.67).

**Conclusion:**

Poor glycemic control predicts an increased risk of recurrent atrial arrhythmias and CV hospitalizations, while delayed CA does not. This underscores an importance of optimizing HbA1c in morbidly obese patients undergoing AF CA.

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