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POSTER PRESENTATION

Prevalence and Predictors of Atrial Fibrillation in Hypertrophic Cardiomyopathy Patients in Oman: A National Cohort Study

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Muscat, Sultanate of Oman

BACKGROUND

- HCM is the most common inherited cardiomyopathy, affecting about 1 in 500 adults.
- Atrial fibrillation (AF) is the most common sustained arrhythmia in HCM.
- In HCM, AF is poorly tolerated and is linked to heart failure, thromboembolic stroke and reduced survival.
- Most data come from Western cohorts; the burden and predictors of AF in Omani and Gulf HCM populations remain largely unknown.

OBJECTIVE

To assess the prevalence and clinical predictors of AF in patients with HCM in Oman, and its association with clinical outcomes.

METHODS

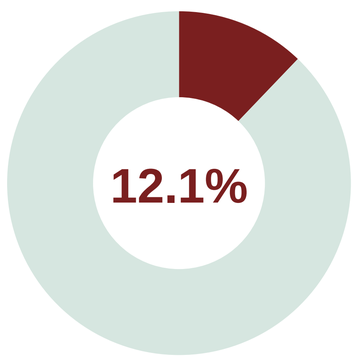
108 HCM patients

2 tertiary centres

8 yrs 2016 – 2023

1. **Design:** Retrospective national cohort study
2. **Setting:** Two tertiary cardiac centres in Oman
3. **Population:** All patients diagnosed with HCM, 2016 – 2023
4. **Data:** Demographics, comorbidities, ECG, echocardiography, therapy and outcomes
5. **Analysis:** Patients with vs. without AF compared using appropriate statistical tests

RESULTS



AF prevalence

13 of 107 analysed HCM patients had AF — roughly 1 in 8.

PREDICTORS OF AF

AF (n = 13) vs **No AF (n = 94)**

Age (median, years) p = 0.006

59 vs **38.5**

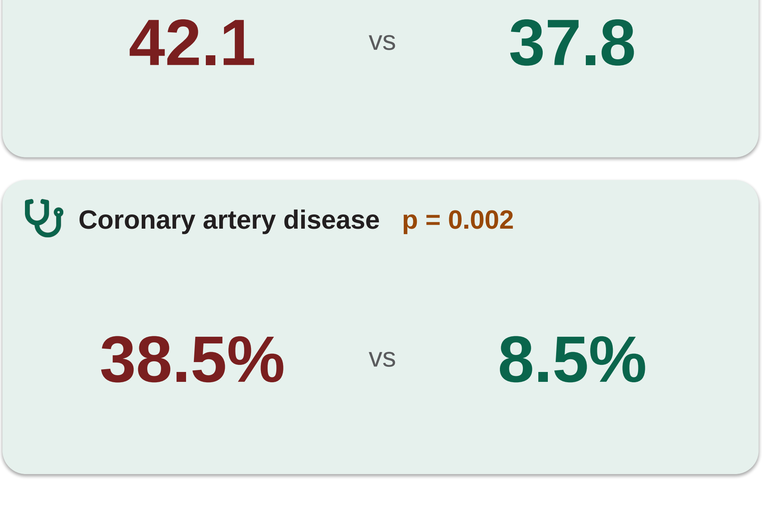
Left atrial diameter (mm) p = 0.009

42.1 vs **37.8**

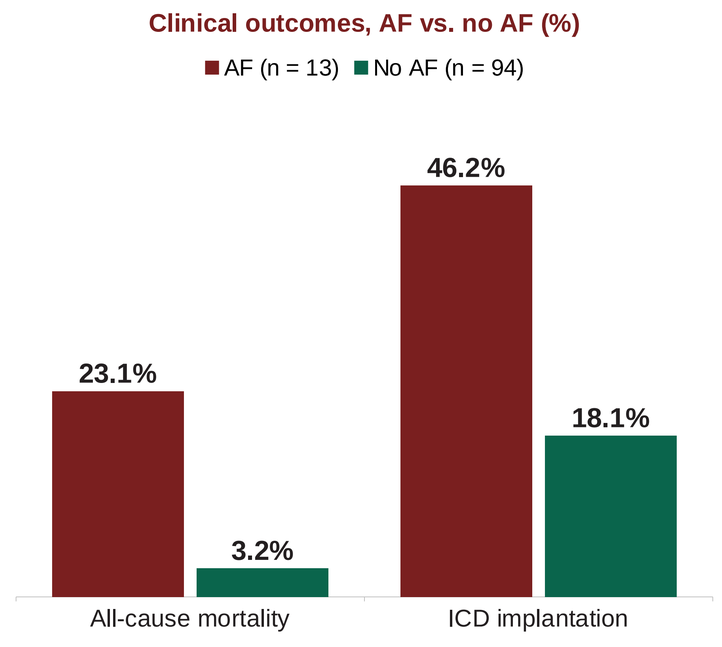
Coronary artery disease p = 0.002

38.5% vs **8.5%**

TREATMENT



OUTCOMES



7× higher mortality with AF

Mortality 23.1% vs 3.2% (p = 0.023) · ICD 46.2% vs 18.1% (p = 0.021)

KEY MESSAGES

- ✔ About 1 in 8 Omani HCM patients has AF.
- ✔ Older age, left atrial enlargement and coronary artery disease identify patients at risk.
- ✔ AF marks a high-risk phenotype with more deaths and ICD implantations.
- ✔ Routine LA assessment and rhythm surveillance should be part of HCM follow-up.

CONCLUSION

AF is relatively prevalent in Omani HCM patients and is associated with increased mortality and ICD implantation. Left atrial size, age and coronary artery disease are key predictors.

REFERENCES

1 Olivotto I, et al. Impact of atrial fibrillation on the clinical course of hypertrophic cardiomyopathy. Circulation. 2001;104(21):2517-24.

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