

**WOLFF-PARKINSON-WHITE PATTERN AND SUDDEN CARDIAC DEATH: A RETROSPECTIVE COHORT COMMUNITY STUDY FROM OLMSTED COUNTY, MINNESOTA**

Moderated Poster Contributions

Arrhythmias and Clinical EP Moderated Poster Theater, Poster Hall, Hall C  
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Session Title: ECG Screening and Risk Prediction

Abstract Category: 8. Arrhythmias and Clinical EP: Supraventricular/Ventricular Arrhythmias

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**Background:** When Wolff-Parkinson-White (WPW) pattern occurs with atrial fibrillation (AF) it can lead to ventricular fibrillation and death, which is a potentially preventable event. Clinical guidelines suggest that asymptomatic individuals should *not* be treated with catheter ablation, based on data suggesting a low association between WPW and sudden cardiac death (SCD). Other studies have suggested a high risk of SCD in WPW patients and proponents have argued for early intervention to prevent SCD. This study looked at the risk of all-cause mortality and SCD in WPW patients, the potential mortality benefits of catheter ablation, and the association of comorbid AF with higher risk of SCD.

**Methods:** We analyzed 419 WPW patients retrieved from the Rochester Epidemiology Project, a validated long-term prospective study of residents of Olmsted County, MN. KM survival curves were generated and groups were compared using the log-rank test.

**Results:** Of the 64 deaths, 11 were SCD and 24 were CV-related. The incidence of SCD in this cohort was 0.0021 (95% CI: 0.0010-0.0037) per patient year of follow-up vs. 0.0008 per year in the general population. Unadjusted results suggested a survival benefit in patients treated with ablation procedures (13%), but was not significant when adjusted for age and sex. There was a significant difference in mortality in patients with preexisting AF vs. those without it (10 year KM survival: 47% vs. 88%,  $p < 0.001$ ), but was nonsignificant after adjustment for age and gender (HR=1.37,  $p=0.30$ ).

**Conclusions:** There is a significant risk of all-cause mortality in the first 10 years following WPW diagnosis. If SCD is to occur, the highest odds are within 10 years of diagnosis. AF prior or around the time of index presentation was associated with SCD. We were underpowered to show a mortality benefit of ablation, as there were only 3 deaths among this population.