I-STOP-Afib: The Individualized Studies of Triggers of Paroxysmal Atrial Fibrillation Trial

Purpose: To test the hypothesis that individualized N-of-1 testing of presumed atrial fibrillation (AF) triggers accompanied by communication of individualized results would improve quality of life related to AF.

Trial Design: This study had two layers: first the main comparison involved randomization to N-of-1 trigger testing versus a control group only monitoring their AF. Within the N-of-1 testing group, patients could select from a menu of triggers (such as caffeine, alcohol, lack of sleep, certain exercise, customized) to then undergo randomized one-blocks wherein they were exposed versus avoided their trigger to determine the influence on AF events.

Primary Endpoints: Change in AF-related quality of life using the Atrial Fibrillation Effect on QualiTy of Life (AFEQT) questionnaire.

Secondary Endpoints: Number of AF episodes among those randomized to trigger testing versus control.

Meta-analyses of N-of-1 trigger testing (effects of exposure to various lifestyle factors on episodes of AF).

Key Takeaways for the Clinician: N-of-1 trigger testing did not improve AF-related quality of life but was associated with fewer subsequent AF episodes. Alcohol exposure was consistently associated with a heightened risk of AF episodes, while caffeine was not.

	Estimate	95% CI	P value
Primary Endpoints	Mean Difference		
Difference in AFEQT score among N-of-1 versus control participants	2.0	-0.9 to 5.0	0.17
Secondary Endpoints	RR		
Self-reported AF events among N-of-1 versus control participants	0.60	0.43-0.83	<0.001

Results: N-of-1 trigger testing did not improve AF-related quality of life. Exposure to alcohol consistently exhibited a heightened risk of self-reported AF episodes, whereas caffeine did not. The data also suggested that exposure to customized triggers might have also increased the risk of short-term AF.

Results reflect the data available at the time of presentation.

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