Vagal Denervation Can Stop Atrial Fib Recurrence

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MUNICH — Vagal denervation is a major therapeutic advance that markedly enhances the long-term efficacy of circumferential pulmonary vein ablation in patients with paroxysmal atrial fibrillation, Carlo Pappone, M.D., said at the annual congress of the European Society of Cardiology.

The vagal denervation technique is per-

formed during the circumferential pulmonary vein ablation procedure using radiofrequency energy. Application of radiofrequency energy around the pulmonary vein ostia often evokes vagal reflexes, which are then abolished by zapping all identified vagal target sites with radiofrequency energy, said Dr. Pappone of San Raffaele University Hospital in Milan.

Increased vagal tone is often associated with onset of atrial fibrillation (AF) in patients with structurally normal hearts.

"Probably the most important mechanism for the initiation and maintenance of atrial fibrillation is vagal enervation," he said.

The addition of vagal denervation is thus a highly significant modification to the circumferential pulmonary vein ablation procedure. The only downside is that vagal reflexes are evocable in only about one-third of patients with paroxysmal AF.

When these patients can be identified, however, they can be ablated readily—and the payoff is big. In Dr. Pappone's series of

297 patients who underwent circumferential pulmonary vein ablation for paroxysmal AF, vagal reflexes were evoked and then ablated in 34.3%. At 12 months of follow-up, 99% of 102 patients who underwent vagal denervation remained free of symptomatic AF, compared with only 85% of 195 patients without vagal reflexes. Marked changes in heart rate variability during follow-up showed that vagal withdrawal had been achieved in patients who underwent ablation of evocable vagal reflexes.



