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## Brugada syndrome: Ablation and future perspectives

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 $\mathbf{B}$ rugada syndrome (BrS) is a genetic heart disease that predisposes individuals to ventricular arrhythmias in special ventricular fibrillation (VF) thus sudden cardiac death. It is marked by a characteristic electrocardiographic (ECG) pattern, a coved-type ST-segment elevation of  $\geq 2$  mm, followed by an inverted T-wave in at least one of the right precordial leads (V1 to V3). The global prevalence of this genetic disorder is about 1 in 2000 individuals. The genetic test is positive only in 30% of the cases. In most of the patients the primary treatments are an implantable cardioverter-defibrillators (ICDs) and quinidine, but recurrent BrStriggered ventricular arrhythmias can persist and a plenty of patients can receive ICD shocks. In face of this problem, a lot therapies has been studied and the ablation are gaining space with good results for refractory patients with a good safety. Since the better understanding of the epicardial substrate, the tools as well the skills which the electrophysiologists has been getting in the last years, the ablation using an epicardial substrate shows promise for BrS patients experiencing BrS-triggered ventricular arrhythmias, offering therapeutic efficacy with an acceptable safety profile. The procedure entails identifying and targeting ablating abnormal electrograms characterized by low voltage, fractionated or delayed potentials, and areas of slow conduction on the epicardial surface of the right ventricular outflow tract (RVOT) and nearby regions (see the image). By directly addressing one of the underlying pathophysiological mechanisms of BrS, epicardial substrate ablation holds the potential to mitigate the arrhythmogenic burden and improve clinical outcomes. A Brazilian meta-analysis single arm, showed in 555 patients in 13 studies the follow-up data provided valuable insights into the long-term ablation outcomes and the incidence of arrhythmia recurrence in patients with BrS. Recurrence of VT/VF during followup was observed in 12% of the patients after the ablation.

You can see the RVOT with the ablation points and the signals on the right side of the picture – fractionated signals and delayed signals on the interest area.

## Biography

Luiz Gustavo Bravosi da Rosa, MD, is a Brazilian EP, fascinated by new technologies as well challenging cases, helping people through his skills. He had a great training in advanced electrophysiology (EP) at McGill University (2021-2023). Since then, he had back to Brazil where he is currently cardiologist in a public university (University Federal of Santa Maria) where he is teaching residents and medical students. Recently he is professor of med school at University Franciscana at Santa Maria, Brazil. He is part of the EP team at HEMOCOR – Santa Maria where he is performing simple and complex ablation procedures and devices implantations. He is developing researchs in the EP field in his Federal University.

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