Percutaneous stellate ganglion block and catheter ablation: not enemies but allies in fighting electrical storm

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We welcome the comment of R. Scaccivillani which allows us to discuss the role of percutaneous stellate ganglion block (PSGB) for the treatment of electrical storm (ES) in relation to catheter ablation (CA).

First of all, we would like to clear the field from the misconception that we consider PSGB an alternative treatment to CA. Percutaneous stellate ganglion block and CA are allies and not enemies playing a complementary, and not an alternative, role on the management of ES.

The European guidelines recommend CA with a class I indication when ES is sustained by recurrent monomorphic ventricular arrhythmias and with a class IIa indication in case of polymorphic ventricular arrhythmias, but triggered by unifocal premature ventricular contractions. Indeed, it is not surprising that not all the patients with an ES undergo CA. The rate of CA in the STAR study was 26%, which was lower than that recently reported by Chouairi (36%) in their double-centre cohort of patients treated with PSGB for ES. Many disparities among centres must be considered and particularly the attitude of performing cardiac sympathetic denervation (9% in the STAR study) which may represent a valid option in case of previous failing ablations and has been reported to be effective in responders to PSGB. Moreover, a recent EHRA survey showed that CA is available 24/7 only in 16.5% of the centres which perform complex ablation.4

Furthermore, CA may be associated with an increased risk of acute haemodynamic decompensation especially in critical patients and both a left ventricular ejection fraction (LVEF) below 25% and the presence of ES are two important determinants of this risk.5 Considering that shocks proved to decrease LVEF, it seems reasonable to try to stabilize the patient, reduce the number of shocks, and let the LVEF recover, moving away from the acute phase of the ES before attempting CA. Consequently, the use of PSGB as a first-line strategy may help explaining why in the STAR study in-hospital death was lower than in the study by Chouairi (27.5% vs. 40.1%). Of course, many other factors may have played a role, but an aggressive approach with early ablation in the midst of an ES might have contributed. We are totally convinced that, besides treating the acute phase, it is of the utmost importance to prevent recurrences and that CA should be not denied especially in patients with scar-related ventricular tachycardia. With reference to this, we believe that the temporary effect of PSGB is not supposed to alter the myocar-dial substrate for following ablation.

In conclusion, ES is a very pleomorphic phenomenon with a wide spectrum of clinical presentations so, treatment should be tailored according to both patient and centre characteristics. However, also those centres able to perform CA 24/7 could consider a PSGB first strategy in order to perform the procedure under the best condition reducing the risk and maximizing the benefit of the procedure. We agree that more data are needed to draw definite conclusions.

Declarations

Disclosure of Interest

All authors declare no disclosure of interest for this contribution.

References


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