Percutaneous left stellate ganglion block in patients with electrical storm. Our preliminary results.

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Purpose The treatment of electrical storm (ES) is a major challenge as conventional drugs are often ineffective. There are limited evidences about the use of percutaneous left stellate ganglion block (PSGB) in this setting, so we sought to assess its feasibility and effectiveness in the case of in-hospital refractory ES.

Methods. We enrolled all the consecutive drug refractory ES occurred at the IRCCS Policlinico San Matteo in Pavia between November and December 2017. PSGB has been provided by the echo-guided injection of 10 ml of local anesthetic (lidocaine 200 mg or bupivacaine 50 mg) at the level of transverse process of C6.

Results. PSGB has been provided in three patients: a 47 years old male (pt 1) with ventricular arrhythmias due to a right ventricular arrhythmogenic dysplasia; a 89 years old female (pt 2) with a myocardial infarction complicated by refractory ventricular fibrillation (VF) and a 78 years old female (pt 3) for recurrent episodes of VF three day after an acute myocardial infarction. Pt 1 and 3 were conscious at the moment of the procedure and they received 50 mg of bupivacaine (after 7 and 4 arrhythmic relapses respectively). Pt 3 underwent to the PSGB with 200 mg of lidocaine during resuscitation for refractory VF after 7 ineffective shocks. In all the three patients after the PSGB there was an arrhythmias free interval of 4 hours, fifteen minutes and 72 hours respectively. No complications occurred.

Conclusions. Our preliminary results, even if on a limited population, suggest the feasibility and the effectiveness of the PSGB for patients with life-threatening ventricular arrhythmias.

Case	Diagnosis	Arrhythmias	Anesthetic	DC-Shock before PSGB	Free interval
#1	ARVD	VT	Bupivacaine	7	4 h
#2	AMI	VF	Lidocaine	7	15 min
#3	AMI	VF	Bupivacaine	4	72 h
#4	Cardiogenic shock	VT	Bupivacaine	9	6 h