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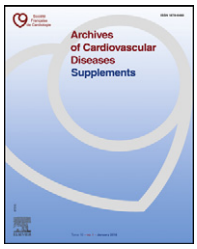

012 — Emergency care and intensive cardiac care

JE19-247

Percutaneous extracorporeal life support in the catheterization laboratory for refractory cardiac arrest in a center without on-site cardiovascular surgery

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Background Cardiac arrest (CA) without return of spontaneous circulation can be treated with veno-arterial extracorporeal membrane oxygenator (vaECMO) as last resort life-saving therapy, implemented by surgical or percutaneous technique. Since surgeons are not always available for such procedures, we performed a study, assessing feasibility and time for vaECMO percutaneous cannulation in the catheterization laboratory in patients with refractory CA.
Methods Single-centre retrospective study in a University hospital in Paris without on-site cardiovascular surgery including patients aged > 18 receiving vaECMO for out- or in-hospital refractory CA (defined as > 15 minutes of arrest despite advanced life support) between 2010 and 2016. Cannulation was performed in the catheterization laboratory by trained interventional cardiologists. Cannulation time in the first study period using anatomic landmarks vessel puncture and conventional wires was compared with the second period cannulation time, using ultrasound guidance and stiff wires.
Results Forty-six patients were included, age 56 (49—62), 34 in the first period. Shockable initial rhythm occurred in 29 (63%) patients, 26 (57%) had acute myocardial infarction. Out-of-hospital refractory CA occurred in 27 (59%) cases. Time from out-of-hospital refractory CA to admission was 100 (80—118) minutes. Cannulation was successful in 42 (91%) patients. Cannulation time was 14 (10—21) minutes overall, 17 (12—26) in the first period and 8 (6—12) minutes in the second period ($P = 0.0005$). Three patients survived, overall survival to discharge was 9%.
Conclusion In patients receiving vaECMO for refractory CA, rapid percutaneous cannulation is feasible in the catheterization laboratory using ultrasound guidance and stiff wires in a centre without on-site vascular surgery. Cannulation time was shorter using ultrasound guidance and stiff wires.
Disclosure of interest The authors declare that they have no competing interest.

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More than 50% of non-healing at one year in ''infarct-like'' acute myocarditis evaluated by Cardiac Magnetic Resonance

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Background Cardiac Magnetic Resonance (CMR) has emerged as a reference tool for the non-invasive diagnosis of myocarditis but its role in follow-up (FU) after the acute event is unknown. We aimed to assess the evolution of CMR parameters between the acute phase of infarct-like myocarditis and 12 months thereafter, and to identify the predictive factors of persistent myocarditis at one year and the long-term prognosis of this infarct-like form.
Methods All patients with infarct-like acute myocarditis confirmed by CMR (with typical non-ischemic late gadolinium enhancement (LGE)) were included from April 2012 to January 2017 in this prospective single-center study at Dijon University Hospital. CMR was performed within 7 days following symptom onset, at 3 months and one year after the acute event. One-year FU included ECG, a cardiac stress test, Holter recording, biological assessments, medical history and a quality of life questionnaire. Patients were classified according to the presence or absence of complete healing at one year, based on the CMR evaluation.
Results A total of 85 patients were included. At one year, 44 patients (52%) exhibited persistent myocarditis on CMR. Multivariate analysis showed that high peak troponin at the acute phase (OR 8.2, 95%CI 1.63—41.20, $P = 0.011$) and the initial extent of LGE (OR 1.1, 95%CI 1.02—1.23, $P = 0.019$) were independent predictors of persistent myocarditis at one year. No patients experienced major adverse cardiac events (cardiac death or serious rhythm disorders). Moreover, patients with persistent myocarditis were more likely than patients with complete recovery to have premature ventricular contractions during the cardiac stress test (31% versus 6%, $P = 0.006$).
Conclusion Less than 50% of patients with infarct-like acute myocarditis showed complete healing at one year. Although no MACE