

ELECTROPHYSIOLOGY AND ELECTROSTIMUATION

Person-in-charge: *Matteo Bertini*

Location: *Ferrara University Hospital*

3 electrophysiologists

The Electrophysiology Lab of the University Cardiologic Centre is located next to the haemodynamic cathlab. It serves for complex ablation the three provincial spoke hospitals and mostly submitted patients from Emilia Romagna. 3 expert electrophysiologists are responsible for conducting the procedures and the related clinic and follow-up. The annual volume of ablations is 250. The lab is very much involved in research and these are the main lines of research:

1. Treatment of Atrial Fibrillation (AF): optimization of the ablation procedure in terms of extracts and without the need for the lead coat by the operator;
2. Optimization of the selection of patients for AF ablation in terms of speckle tracking ultrasound;
3. Treatment of Paroxysmic Supraventricular Tachycardia (TPSV): leading to an international multicentric observational study on ablation of intranodal re-entry tachycardia with irrigated catheter and 3D mapping system;
4. Scanning on epidemiology and determination of optimal treatment of AF and atrial flutter in thalassaemia patients;
5. Right and left ventricular extrasystole ablation.

Electrostimulation

The annual volume of procedures is around 350 pace-maker implantations, 60 intraventricular cardiac defibrillators (ICD), 30 cardiac resynchronization devices (CRT), and 80 external electrical cardioversions.

Than main lines of research are:

1. CRT implantation following a multimodal imaging with speckle tracking ultrasounds and RMC;
2. Prevention of infection and hematomas in the implantation of devices such as PM, ICD or CRT;
3. Usefulness of the PM or ICD implant with Ecoguidate venous punctures;
4. Evaluation of the effectiveness of stimulation of the conduction system;
5. Promotion and conduction of a multicentric register on the stimulation of the driving system.

Cardiogenetics

In the last 5 years, an intense programme of Cardiogenetics has been launched in collaboration with the very well-known Department of Genetics of the University of Ferrara. Both cardiologists from the Electrophysiological Lab and Heart Failure Clinic attend the ambulatory visits and provide the prognostic results.

The main areas of research are:

- 1) Overall conduction disease;
- 2) Brugada syndromes;
- 3) Inherited cardiac diseases;
- 4) Cardiomyopathy with emphasis on cardiac amyloidosis.

Electrophysiology

Ep Lab

