

# Prva godina ablacijskog liječenja u Kliničkom bolničkom centru Rijeka

## First year of catheter ablation in University Hospital Center Rijeka

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**Uvod:** U srpnju 2015. godine započeo je s radom elektrofiziološki laboratorij u Kliničkom bolničkom centru (KBC) Rijeka. U prvoj godini učinjena su elektrofiziološka ispitivanja u 184 bolesnika. U 30 bolesnika učinjeno je elektrofiziološko ispitivanje uz provokaciju ventrikularne tahikardije, a u 154 učinjena je ablacija aritmije. U 144 bolesnika primjenjena je radiofrekventna ablacija (RF) aritmije, a od travnja 2016. započelo je liječenje fibrilacije atrija krioablacijom te je do srpnja 2016. učinjena u 10 bolesnika. U tijeku je nabava CARTO sustava te se početak primjene očekuje u listopadu ove godine. Cilj ovog istraživanja bio je prikazati uspješnost ablacijskog liječenja te stopu reablačija i recidiva u bolesnika liječenih RF i krioablacijom.

**Pacijenti i metode:** U retrospektivno istraživanje uključena su 154 bolesnika (92 muškarca i 62 žene) liječena ablaciom u KBC-u Rijeka do srpnja 2016. Indikacije za liječenje bile su atrioventrikularna (AV) nodalna kružna tahikardija (52 bolesnika – 33,77%), undulacija atrija (32 bolesnika – 20,78%), AV kružna tahikardija (18 bolesnika – 11,69%), atrijska tahikardija (jedan bolesnik – 0,65%), krioablacija fibrilacije atrija (10 bolesnika – 6,49%). U 41 bolesnika (26,62%) indikacija za ablacijsko liječenje bila je refraktorna fibrilacija atrija uz tahtaritmiju klijetki te je učinjena ablacija AV čvora uz ugradnju elektrostimulatora srca ukoliko ranije nije ugrađen (u 22 bolesnika radio se o trokomornom, u 19 bolesnika o dvo ili jednokomornim elektrostimulatorima).

**Rezultati:** Uspješnost ablacijske u prvom aktu bila je 96,75% (149 bolesnika). U pet bolesnika (3,36%) došlo je do recidiva te je učinjeno 5 reablačija (četiri bolesnika s recidivima te jedan bolesnik u kojem je primarna ablacija bila neuspješna) uz uspješnost reablačije od 100%. Komplikacije su registrirane u dva bolesnika (1,30%), a radio se o jatrogenom AV bloku i pseudoaneurizmi femoralne arterije.

**Zaključak:** Ablacijsko liječenje srčanih aritmija je sigurna i efikasna metoda liječenja, a rezultati rada elektrofiziološkog tima KBC-a Rijeka u prvi godinu dana u skladu su s rezultatima objavljenim u drugim svjetskim centrima te smjernicama svjetskih kardioloških udruženja.<sup>1,2</sup>

### LITERATURE

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**Background:** In July 2015 the first electrophysiology laboratory in University Hospital Center (UHC) Rijeka became operational. During the 1st year, electrophysiological studies have been performed in 184 patients. In 30 patients electrophysiological studies with ventricular tachycardia provocation have been performed while 154 patients also underwent ablation of the arrhythmia. In 144 patients radiofrequency ablation was used. Since April 2016, cryoablation is being used in patients with atrial fibrillation and by July 2016, 10 patients have been treated with this method. A CARTO system is also being acquired and is expected to become operational in September 2016. The aim of this study is to present the success rate of ablation treatment and the rate of reablation and recurrence of arrhythmias in patients treated with catheter ablation.

**Patients and Methods:** 154 patients (92 male and 62 female) who underwent catheter ablation in UHC Rijeka have been included in this study. Indications for ablation included atrioventricular (AV) nodal reentrant tachycardia (52 patients – 33.77%), atrial undulation (32 patients – 20.78%), AV reentrant tachycardia (18 patients – 11.69%), atrial tachycardia (1 patient – 0.65%), cryoablation of atrial fibrillation (AF) (10 patients – 6.49%). In 41 patient (26.62%), the indication for catheter ablation was refractory AF with ventricular tachyarrhythmia, and ablation of the AV node has been performed along with implantation of a cardiac pacemaker if it hasn't been already implanted (22 three chamber pacemaker were used, and 19 dual or single chamber pacemakers).

**Results:** The success rate of catheter ablation in the first try was 96.75% (149 patients). The recurrence of arrhythmia was noted in 5 patients (3.36%), and 5 reablations (4 patients with recurrence and 1 patient whom the arrhythmia was not successfully ablated in the first try) have been performed with a reablation success rate of 100%. Complications have occurred in 2 patients (1.30%) and included AV block and femoral artery pseudoaneurysm.

**Conclusion:** Catheter ablation of arrhythmias is proven to be a safe and effective method of treatment. The results of ablation during the first year of the electrophysiology laboratory in UHC Rijeka are similar to the results published by other electrophysiology centers and international guidelines.<sup>1,2</sup>