

CARDIAC IMPLANTABLE ELECTRONIC DEVICES: DIFFERENT ISSUES

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Temporary Complete Heart Block in a 78-Year-Old-Patient Due to Biliary Colic



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INTRODUCTION Acute cholecystitis and biliary colic may have signs and symptoms similar to those of acute coronary syndromes. Cholecystitis and/or biliary colic have both been reported as trigger factors for bradyarrhythmia in the literature.

CASE REPORT A 78-year-old male patient was admitted to our emergency department due to acute abdominal pain. The ECG on admission showed sinus bradycardia (40 bpm) without signs of acute ischemia and a small period (7 sec) of complete atrioventricular (AV) block. He was initially treated with analgesics. After the remission of the pain, a new ECG was performed which showed sinus rhythm of 55 bpm. The AV block terminated one hour after the patient's admission. The patient remained hemodynamically stable during the episode. He underwent an ultrasound of the abdomen which revealed mud and one stone in the gallbladder without signs of inflammation. D-dimer and troponin were negative, while the coronary angiography showed coronary vessels without significant lesions.

CONCLUSIONS Biliary colic can cause severe reversible reflex bradycardia (Cope's Sign), even complete heart block. Pain relief is very important in the management of such cases.

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Total Atrioventricular Block Due to Leptospirosis



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INTRODUCTION A 24 year old factory worker male was admitted to Emergency Department Hasan Sadikin Hospital/Padjadjaran University, Bandung, Indonesia because of syncope approximately 10 minutes duration. There was no residual neurological deficit at presentation. History taking after the patient regained consciousness revealed that he complained of high fever over the last 7 days, accompanied by nausea, vomiting, severe muscle pain. There was no icterus and urination abnormalities. Two weeks prior to admission, he cleaned sewer in front of his house on bare foot.

CASE Vital signs were normal except for pulses of 25-30 bpm. Physical exams demonstrated no cardiac abnormality, but marked hepatomegaly. Laboratory revealed leukocytosis 21.600/mm³, SGOT/SGPT 248/352 U/l, Uream/Creatinin 67/1,72 mg/dl, Troponin T >2,0 ng/ml. Chest X-ray showed no cardiomegaly or pulmonary disease. Total atrioventricular block was noted at the ECG. Further laboratorium results were as follows: IgM anti Dengue negative, IgM anti Leptospira 13,3 units. Normal cardiac chambers and normal ejection fraction was found on Echocardiogram. The patient was put on TPM (apex RV, treshold 0,75mA, output 1 mA, 70 bpm), and antibiotic course of Azithromycin 1x500mg po and Cefotaxime 3x1 gr IV. On 5th day of hospitalization, the rhythm became sinus with HR 75 bpm, thus TPM was turned off, subsequently removed, and the patient was discharged. At follow up outpatient visit, the microscopic agglutination test was 1:1400, but blood culture was negative. Therapy was continued with Doxycycline 2x200mg po. Leptospirosis is a bacterial infection caused by *Leptospira* genus, usually transmitted by animal urine or by water or soil containing animal urine coming into contact with breaks in the skin. Prior observational studies described cardiac involvement was discovered in 52% patients with serologically-positive leptospirosis and myocarditis was demonstrated in 8.1% of

patients. In other studies, ECG abnormalities was found in 59% of patients, with first-degree AV block and atrial fibrillation were the most frequent findings. This was a rare case of myocarditis due to leptospirosis complicated by total atrioventricular block.

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Perioperative Complication Rates in Patients With De Novo Implantation of a Cardiac Device: Is There an Association Between Complication Rates and the Day of Implantation (Friday versus Monday-Thursday)



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BACKGROUND Until now there is no data available concerning the complication rate for implantation of cardiac devices (pacemaker (PM), implantable cardioverter-defibrillator (ICD)) in association with the day of the week, the implantation takes place.

PURPOSE In this retrospective study we aimed to analyse the correlation of perioperative and early postoperative complications after PM and ICD Implantation from day of surgery.

METHODS We analyzed data from a total of seven hundred and thirty-two consecutive patients between January 2011 and December 2014, who underwent either a new ICD or a new SM Implantation in our hospital (mean age: 73 ±12). 22,5% (n:165) were ICDs and 77,5% (n:567) PMs. Cardiac resynchronization therapy (CRT) was excluded. We analyzed the day by day occurrence of complication, and we divided the patients in two groups (group 1 implantation took place between Monday to Thursday, group 2 implantation took place on Friday).

RESULTS One hundred and seventy-five patients (23,9%) were operated on a Friday and five hundred and fifty-seven patients (76,1%) on other weekdays. The total complication rate was 4,5% (n: 33) (for ICDs 3%, for PMs 4,9%). The complication rate on a Friday was 4% and on the other days was 4,7%. We found no statistical relevance of the complication rate and the day the operation carried out (p> 0,05). Day to day variation of complication rate was not significantly different.

CONCLUSION Cardiac device (PM, ICD) implantations will be carried out just as safely and effectively on Fridays without resulting in an increased complication rate compared with the other days.

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Incidence and Predictors of Moderate to Severe Tricuspid Regurgitation After Permanent Pacemaker Implantation; Clinical Implications of Atrial Fibrillation on Its Progression



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BACKGROUND Incidence and predictors of tricuspid regurgitation (TR) after permanent pacemaker (PM) implantation were not well defined to date.

OBJECTIVE We sought to find out these predictors, especially focused on the influence of atrial fibrillation (AF).

METHODS A data of 578 patients underwent pacemaker implantation without significant TR (moderate or severe degree) in the baseline echocardiography were evaluated. The major outcomes were incidence of overall and isolated TR of moderate to severe degree in the follow-up echocardiography.

RESULTS During a follow-up period of 7.3 years, overall TR were developed in the 95 patients (16.4%). The 48 patients (51%) had concomitant structural heart diseases (54.2% heart failure, 40.7% valvular disease), and 47 patients (49%) were presented as isolated TR. Multivariable analysis showed independent predictors of overall and isolated TR (table). Development of persistent/permanent AF (PeAF) was independent predictor of both overall and isolated TR. Patients with PeAF showed higher 7-year incidence of overall and isolated TR compared to PAF or those without AF (figure).