PACEMAKER LEAD AND ATRIAL THROMBOSIS, A RARE EVENT BUT OF HIGH CLINICAL IMPORTANCE

Lorenzo Pistelli (a), Giuseppe Dattilo (a), Francesca Parisi (a), Pasquale Crea (a), Lorenzo Gurioli (b), Walter Grosso Marra (c)

(a) DIPARTIMENTO DI MEDICINA CLINICA E SPERIMENTALE, POLICLINICO G. MARTINO, UNIVERSITÀ DI MESSINA, ITALIA; (b) DIPARTIMENTO DI SCIENZE DI SANITA’ PUBBLICA E PEDIATRICA, IVREA; (c) SC CARDIOLOGIA, IVREA

Background: Trans-venous lead-related thrombosis is an undervalued issue. Since the lack of guidelines or evidences regarding the best therapeutic option, treatment of endocavitary clots on pacemaker wire is left to individual decision between surgical catheter extraction, thrombolysis or anticoagulation therapy. In some patients, the labile equilibrium between hemorrhagic and thrombotic events may further complicate management.

Case presentation: We report the case of a 86 years-old man with heart failure (HF) severely reduced ejection fraction (EF) due to chronic ischemic cardiomyopathy and several co-morbidities. He had a reacution of HF requiring hospitalization secondary to new-onset atrial flutter. During hospital stay, in light of episodes of severe bradycardia, he underwent single-lead PM implantation. Few days after discharge he developed deep vein thrombosis in situ of PM electro catheter insertion (poor compliance to anticoagulation therapy was reported) which improved after few days of regular therapy assumption. After few months anticoagulation therapy was dismitted due to etiology unknown-anemization requiring transfusion, but 20 days later he was once again admitted, this time because of pulmonary embolism. Trans Thoracic Echocardiography (TTE) enlightened a severely dysfunctioning right ventricle and a mass in right atrium hanging the wire. Trans esophageal echocardiography was then performed showing hyper-reflective and highly mobile material with numerous “arborizations”. Intravenous heparin was started as pulmonary embolism therapy. Once infective etiology was excluded, total body Computer Tomography was performed to investigate a possible paraneoplastic origin. Presence of a meningioma was enlightened. Heart-Team evaluation excluded catheter extraction in light of patient’s frailty, while thrombolysis was contraindicated. Vitamin K Antagonists was then started. At 1 month Follow Up no further embolic neither hemorrhagic events were reported. TTE showed a reduction in mass dimension and an improvement in right ventricle function.

Conclusion In a guidelines-lacking field, VKA can be an effective option in cases of lead-related thrombosis when surgery or thrombolysis are not suitable. Further studies are needed to establish their real effectiveness in management of E-C-related endocavitary thrombi.