Superior Vena Cava Syndromes as A Late Complication of Pacemaker Implantation: Two rare cases

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Introduction: Superior vena cava syndrome is a rare complication of pacemaker lead implantation, especially as a late complication. It is induced by endothelial disruption from repeated mechanical trauma by pacemaker lead. The real incidence of central venous stenosis due to pacemaker implantation is uncertain and is likely to be underestimated. The management is still debatable. Rule of oral anticoagulant is not clear yet.

Methods: Case I: A 65 years old man presented with swollen of the left sided neck and shortness of breath since 1 month before admission. ICD was implanted 3 years earlier, caused by type I Brugada syndrome. MSCT result showed stenosis at superior vena cava at level of brachiocephalic trunk. Patient has been given medication warfarin 2 mg od, bisoprolol 2.5 mg od, candesartan 8 mg od, and have a good compliance. After 5 months of follow up, symptoms were relieved.

Result: Case II: A 54 years old man presented with shortness of breath since 6 months before admission. PPM was implanted 3 years earlier, caused by TAVB and advanced heart failure and had been suggested to CRT procedure. During CRT procedure, the LV lead could not implanted properly because stenosis at left SVC. After ballooning and nitroglycerin intra-axillary vein, left SVC still stenosis, the procedure was postponed because of a long time procedure and high dose of radiation. Patient has been given medication metoprolol 12.5 mg bd, furosemide 40 mg od, telmisartan 80 mg od, warfarin 2 mg od, clopidogrel 75mg od. After 3 months of follow up, patient getting better.

Conclusion: Stenosis of SVC due to complication of pacemaker lead implantation is rare. Treatment of SVC stenosis is individualized and there are no established guidelines at the present time. In this serial case, warfarin has been proven in improving SVCs symptoms.