INTRODUCING AN EXTERNALIZED PERMANENT ACTIVE FIXATION PACING AS A SAFEST APPROACH IN PATIENTS REQUIRING PROLONGED TEMPORARY PACING

Haseeb Raza

Introduction: Temporary-permanent (T-P) pacemakers can serve as safest, short-term, easily implanted and stable temporary pacing option in various acute clinical conditions. Managing patients with systemic infections and concurrent need for acute pacing due to new-onset of hemodynamic relevant bradycardia such as at high grade AV-block is very difficult. Immediate permanent pacemaker implantation is deferred in patients with severe sepsis or other related medical conditions. So prolonged temporary pacing is needed as a bridging therapy. The complication rate of temporary pacing including dislodgement of pacing leads is significantly rising which can lead to further morbidity and mortality of the patient. To minimize this complication, an active fixation permanent pacing approach was introduced.

Methods: 52 year old female patient presented in the emergency department with complaints of dizziness. Examination showed lower rate of radial pulse with BP 150/70 mmHg. Chest was clear to auscultation and there was no neurological deficit. ECG showed complete heart block so TPM passed (via right subclavian vein) in the emergency department to save the patient. Labs were collected which showed increased TLC, refering to underlying infection. Antibiotic cover was started. As the infection may take more than a week to resolve, it was planned to proceed for external PPM (Temporary PPM) because the patient became TPM dependent meanwhile and we could not afford to lose the patient if the TPM gets dislodged during the infection resolution time. So using Right internal jugular vein approach, single chamber VVIR generator was fixed to the right side of neck with the RV lead actively fixed to the RV apex. After the resolution of infection, Dual chamber PPM was implanted on the left side via left subclavian vein approach and external PPM was removed.

Result: Patient was discharged and asked to visit Pacemaker clinic after 3 days. She was asymptomatic and doing well.

Conclusion: The purpose of presenting this is that patients presenting with severe sepsis or other indications who defer permanent pacemaker implantation requiring prolonged temporary cardiac pacing can be benefitted by implantation with active-fixation permanent pacing. It is a safe, effective, and convenient method. Subclavian approach is more comfortable than internal jugular access. Externalized permanent active-fixation pacemaker lead connected to a permanent pacemaker generator for temporary pacing may also be beneficial because of improved lead stability, and greater patient mobility and comfort. This technique is cost effective, improves the quality of life and minimizes the risks and complications associated with the immobilization of the patients.