

Case of the Week

69-YEAR-OLD CRITICALLY ILL PATIENT UNDERGOES PERMANENT PACEMAKER IMPLANTATION WITHOUT SURGERY: SUCCESS STORY OF MICRA

A 69-year-old male patient, presented with cardiac arrest at secondary care hospital. He received CPR for a long time, and was intubated and kept on a ventilator. In view of provisional diagnosis of a complete heart block, a temporary pacemaker was inserted. Patient was then referred to Apollo Hospitals, Navi Mumbai for further management.

On arrival he was drowsy with uncertain neurologic condition. He was diagnosed with septic shock, anemia, hypokalemia, left sided pleural effusion, and acute kidney injury. With multiple comorbidities, a decision was made to manage his condition conservatively. After 10 days of masterly observation he was extubated, all parameters stabilized. His temporary pacemaker was removed, as there was no bradycardia after admission.

Unfortunately, after two days he again suffered bradycardia followed by a cardiac arrest. With a series of CPR cycles, ROSC was achieved. He was intubated, kept on a ventilator and reinsertion of a temporary pacemaker was done. But the patient developed severe pulmonary and urinary infections and an associated septic shock.

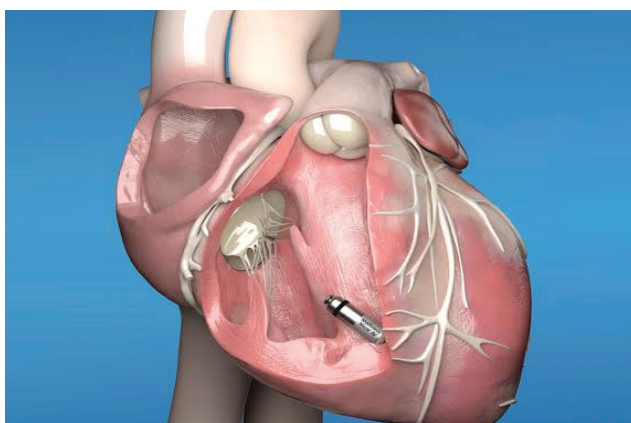
At this time, the patient was to undergo permanent pacemaker implantation. However, since the patient

was already in sepsis, a routine permanent pacemaker with a surgical incision to the chest was not ideal due to the risk of infection to the pacemaker generator. Infection of the pacemaker pocket is one of the most dreaded complications, often resulting in pacemaker explanation.

At this point the team considered an innovation – performing a pacemaker implantation without surgery i.e. installing leadless pacemaker: MICRA.

MICRA is a special type of permanent pacemaker which does not require wires or a surgical pocket on chest, thus reducing chances of pocket infection, especially in the given scenario. It is the size of large vitamin capsule and works similar to a routine pacemaker. It also reduces the risk of lead fracture or respiratory complications, mainly pneumothorax. The pacemaker was put from the femoral vein into the RV Apex and pacing was achieved. Patient benefitted from the procedure and was discharged with tracheostomy. He continues to do well with the Pacemaker.

MICRA pacemaker has multiple advantages over routine permanent pacemaker: reduction in complication rates, less procedure time, no postoperative restrictions to the hand movements and no tricuspid regurgitation.



SURGERY AT APOLLO HOSPITALS IS SAFE

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