

Abbott launches world's first dual-chamber leadless pacemaker system in India

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Wireless communication and synchronisation between two leadless pacemakers



Abbott, a global healthcare company, has announced the launch of AVEIR™ dual chamber (DR) leadless pacemaker system - the first of its kind in the world. This tiny high-tech device helps the heart beat properly – without wires (leads) or surgical pockets used in traditional pacemakers.

Until recently, leadless pacemakers could only support one chamber of the heart, because getting two separate devices to work together in sync was a major challenge. Abbott has changed that with its breakthrough implant-to-implant (i2i) technology. This innovation allows two tiny leadless pacemakers—one in the upper chamber (right atrium) and one in the lower chamber (right ventricle)—to communicate with each other in real time, beat by beat. For the first time, patients can benefit from true dual chamber leadless pacing, helping the heart beat more normally and synchronously—without the need for wires.

The AVEIR DR leadless pacemaker system includes two tiny devices - AVEIR VR, which helps control the heartbeat in the lower chamber (right ventricle), and AVEIR AR, which supports the upper chamber (right atrium). Each of the two leadless pacemakers is roughly about one-tenth the size of a traditional pacemaker. Once implanted and paired, these devices communicate with each other on every heartbeat with the i2i technology. This tech utilises high-frequency pulses to relay messages through the naturally conductive characteristics of the body's blood between each leadless pacemaker. This method uses far less battery power than inductive, radio frequency or Bluetooth® communication which are other alternatives used in implantable medical devices or traditional pacemakers.