

APOLLO

CHENNAI INSIGHTS

Chennai Unique Cases

JUNE 2026



**PUSHING BOUNDARIES,
PRESERVING LIVES.**

5-DEVICE HEART

Milestone in complex leadless pacing.

ROBOTIC GROIN DISSECTION

World-first lateral approach.

LUNG-CONSERVING VATS

Tumour clearance, zero tissue loss.

PODIATRIC SEQUESTRECTOMY

Advanced limb-salvage surgery.

PULSED FIELD ABLATION

Tamil Nadu's First breakthrough
in heart rhythm care





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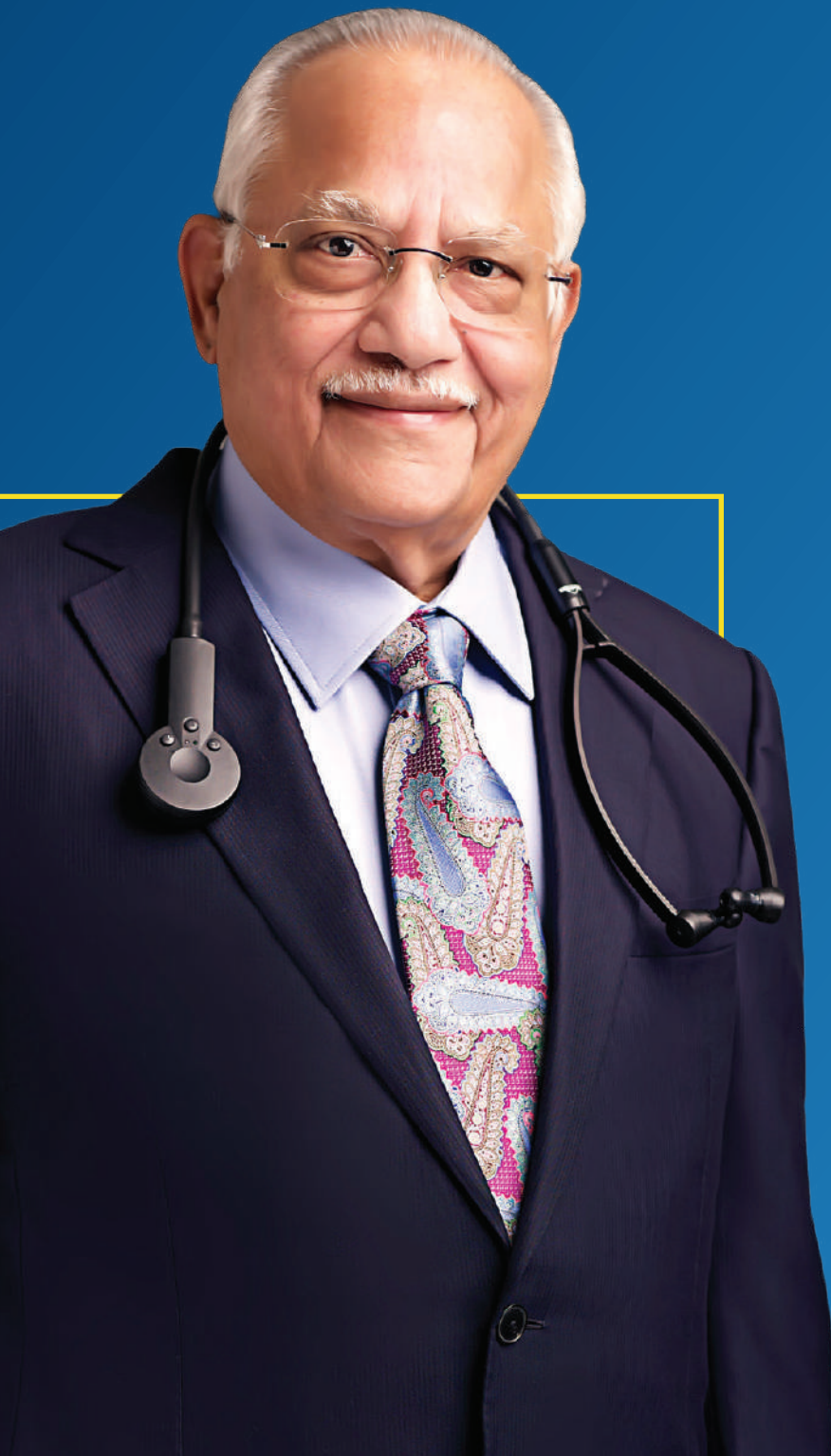
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FROM THE CHAIRMAN'S DESK: VISION AND MISSION



Our mission is to bring healthcare of International standards within the reach of every individual.

We are committed to the achievement and maintenance of excellence in education, research and healthcare for the benefit of humanity.

Our vision is to make India as a Global Healthcare Destination.

Dr. Prathap C. Reddy

Founder & Chairman
Apollo Hospitals



01

"BUILT TO BEAT": A RARE CASE OF FIVE CARDIOVASCULAR PROSTHESES

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INTRODUCTION

The rapid evolution of interventional cardiology is continuously redefining the boundaries of what is medically possible. Advanced transcatheter technologies now allow clinicians to manage complex multi-valvular disease and rhythmic disorders in patients who were previously considered inoperable or prohibitively high-risk. This case demonstrates the successful integration of five distinct cardiovascular devices in a single patient.

CLINICAL PRESENTATION

A 73-year-old male with a complex cardiac history has been under our care since 2022. His surgical history dates back to 2000, when he underwent a mechanical mitral valve replacement in Mumbai. In 2022, he presented to our facility with severe aortic stenosis and successfully underwent Transcatheter Aortic Valve Implantation (TAVI).

One year later, he developed severe tricuspid regurgitation. Due to his anatomical complexity, the condition was not amenable to transcatheter edge-to-edge repair (clipping). Consequently,

we performed a heterotopic bicaval valve implantation (TricValve), placing prostheses in the Superior Vena Cava (SVC) and Inferior Vena Cava (IVC) to manage the regurgitation.

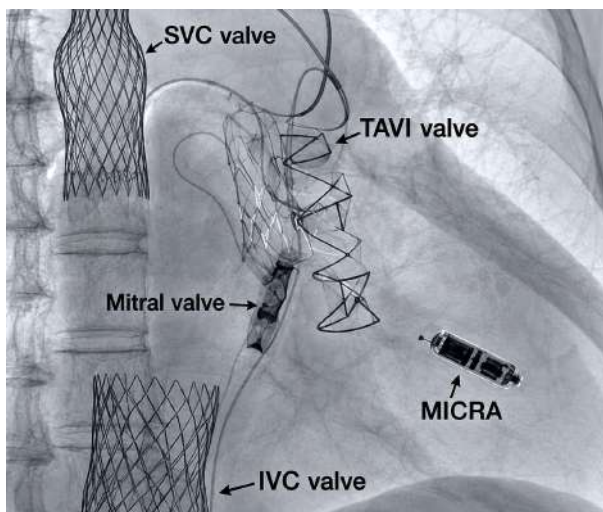
Recently, the patient was hospitalised locally following a syncopal episode (collapse). He was diagnosed with Tachy-Brady Syndrome, characterised by an irregular heart rate with prolonged pauses, and was advised to undergo permanent pacemaker implantation.

INVESTIGATIONS AND DIAGNOSIS

Upon returning to our centre, clinical evaluation confirmed the diagnosis of Tachy-Brady Syndrome. Given the patient's extensive surgical history and the presence of multiple existing prostheses, a traditional transvenous pacemaker posed significant risks. A decision was made to proceed with a leadless pacing solution to minimise lead-related complications and avoid interference with existing hardware.

TREATMENT

The patient underwent successful implantation of a Micra Leadless Pacemaker. The device was delivered directly into the right ventricle via femoral venous access. The procedure was completed without complications, leveraging the minimally invasive nature of leadless technology to ensure a rapid recovery.



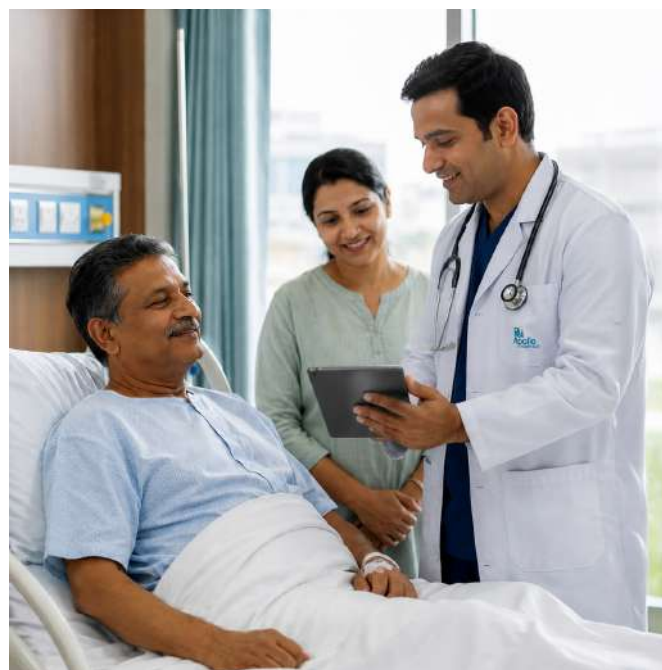
POSTOPERATIVE OUTCOME

The patient's recovery was excellent. He was monitored overnight and discharged the following day in stable condition. This procedure brings the total number of cardiovascular

prostheses in this patient to five:

1. Mechanical Mitral Valve (Surgical)
2. Aortic Valve (TAVI)
3. SVC Valve (TricValve)
4. IVC Valve (TricValve)
5. Micra Leadless Pacemaker

Of these five life-sustaining devices, four were successfully implanted by our interventional team.



CLINICAL SIGNIFICANCE

This case highlights the clinical utility of modern interventional technologies in managing "high-risk" patients. By utilising transcatheter and leadless innovations, we can reduce procedural complications and significantly shorten recovery times. Furthermore, this patient's journey, travelling from a distant metropolitan city to seek our specialised care, underscores the importance of patient-physician trust in managing long-term, multi-stage cardiac pathologies.

02

WORLD'S FIRST LATERAL APPROACH ROBOTIC GROIN DISSECTION USING THE MEDTRONIC HUGO RAS SYSTEM

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INTRODUCTION

In a landmark achievement in robotic uro-oncology, Apollo Hospitals, Greams Road, Chennai, has performed the world's first bilateral groin dissection via a lateral approach using the Medtronic HUGO™ Robotic-Assisted Surgery (RAS) platform. This milestone underscores the feasibility of performing high-complexity oncological procedures across diverse robotic systems, prioritising patient recovery without compromising surgical precision.

CLINICAL PRESENTATION

A 42-year-old male presented with penile cancer that had been inadequately managed at a previous facility. A comprehensive clinical evaluation and diagnostic workup revealed that the malignancy required aggressive intervention. This necessitated not only the management of the primary lesion but also a bilateral inguinal lymph node dissection (groin dissection) to address potential lymphatic spread.

INVESTIGATIONS AND DIAGNOSIS

Standard staging protocols were followed to assess the extent of nodal involvement. Traditionally, inguinal lymph node dissection requires large incisions, which are notoriously associated with high morbidity rates. Given the patient's age and the need for optimal oncological outcomes, the surgical team opted for a minimally invasive robotic approach to mitigate the risks of skin breakdown, infection, and chronic lymphatic leakage.

TREATMENT

The surgical team utilised the Medtronic HUGO RAS system to perform a Bilateral Lateral Approach Robotic Inguinal Lymph Node Dissection. While robotic groin dissection is an established alternative to open surgery, the lateral approach-accessing the operative field from the side of the thigh-offers specific surgical advantages like expanded working space, enhanced ergonomics, and efficiency. The procedure involved precise dissection through small keyhole ports, avoiding the trauma associated with traditional large groin incisions. This technique requires a sophisticated understanding of inguinal anatomy and advanced proficiency with the robotic platform.



POSTOPERATIVE OUTCOME

The patient's recovery was excellent and far exceeded the typical trajectory of open surgery. There were no significant postoperative complications, such as wound dehiscence or major lymphatic discharge. The patient was mobilised early and discharged in stable condition, demonstrating the clear benefits of the robotic lateral approach.



CLINICAL SIGNIFICANCE

This successful case demonstrates that advanced robotic techniques are "platform-independent" when guided by an experienced surgical team. By successfully adapting the lateral approach from the da Vinci system to the HUGO RAS system, Apollo Hospitals has proven that surgical expertise and anatomical knowledge can be seamlessly translated across cutting-edge technologies. This approach significantly reduces patient morbidity, shortens hospital stays, and maintains the rigorous standards required for cancer control.

03

PARENCHYMA - PRESERVING BRONCHIAL TUMOUR RESECTION: A LUNG CONSERVING APPROACH

Complete Tumour resection with lung preservation

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A 29-year-old gentleman presented with complaints of intermittent hemoptysis for 6–8 months, with the most recent episode occurring one week before admission. Notably, there was no history of fever or weight loss, and the patient was otherwise clinically stable.

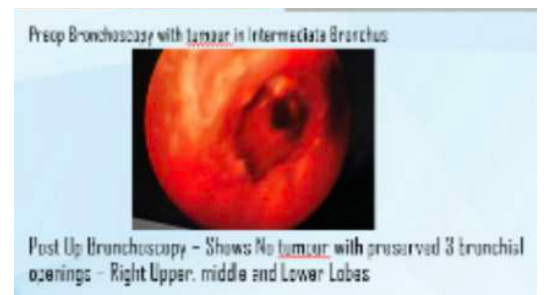
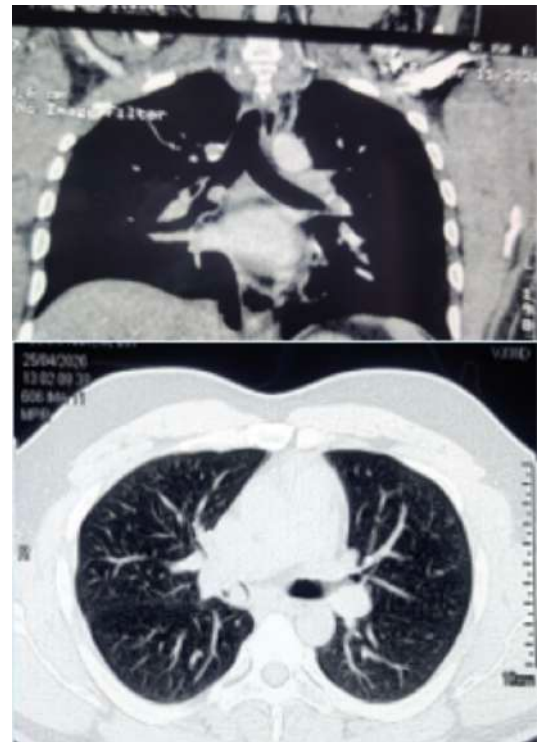
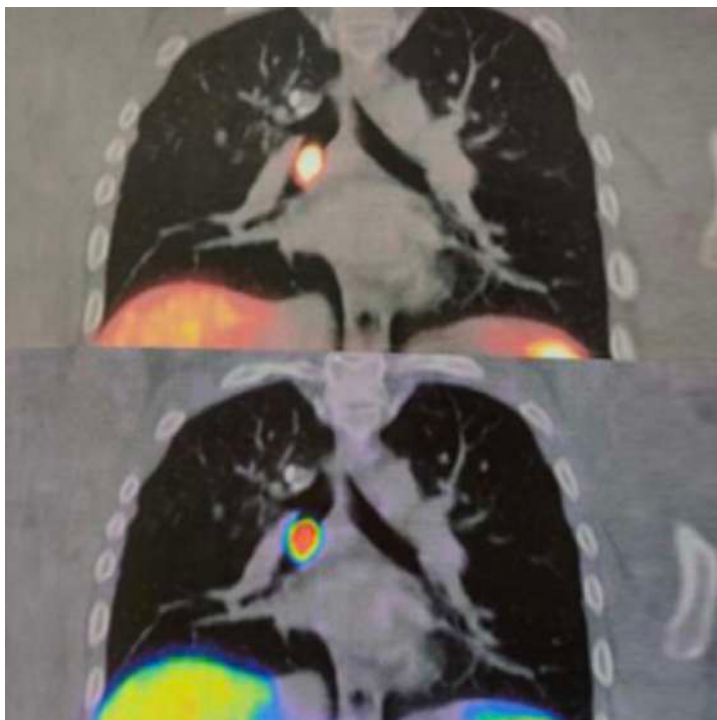
Initial evaluation with CT chest imaging revealed a soft tissue lesion in the right main bronchus, raising suspicion for a bronchial carcinoid or adenoma. Further assessment with bronchoscopy demonstrated a smooth endobronchial mass near the right upper lobe (RUL) cutoff, causing significant luminal obstruction of approximately three-fourths of the right intermediate bronchus, with the distal airway segments appearing normal.

A biopsy of the lesion confirmed the diagnosis of a carcinoid / neuroendocrine tumour of the lung. Subsequent PET-CT imaging identified a well-defined, enhancing endobronchial nodule in the right bronchus intermedius, consistent with a primary neuroendocrine (carcinoid) tumour, with no evidence of distant disease.

SURGICAL MANAGEMENT

The patient underwent a video-assisted thoracoscopic surgery (VATS) procedure involving a parenchyma-preserving sleeve resection of the bronchus intermedius, along with systematic mediastinal lymph node dissection (stations 4, 7, 9, and 11).

This advanced surgical technique allowed for complete excision of the tumour-bearing bronchial segment while preserving the entire lung parenchyma, thereby maintaining optimal respiratory function.



CLINICAL SIGNIFICANCE

Parenchyma-preserving sleeve resections are technically demanding procedures practised in select high-volume centres. They represent one of the best lung-conserving surgical options for patients with endobronchial carcinoid tumours, offering:

- Complete oncological clearance
- Preservation of lung tissue and function
- Reduced long-term morbidity compared to lung resection

OUTCOME

The patient achieved successful tumour clearance with preservation of lung function. This case highlights the importance of early diagnosis, precise surgical planning, and meticulous execution, which together contribute to excellent clinical outcomes and quality of life.

04

LIMB SALVAGE IN CHRONIC FOREFOOT OSTEOMYELITIS



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CASE SUMMARY

A 54-year-old gentleman presented with a chronic, non-healing ulcer of the right forefoot associated with recurrent infections and significant functional limitation. He had a two-year history of multiple ulcers and had previously received treatment at CMC Vellore.

Magnetic resonance imaging demonstrated extensive marrow oedema with T1 hypo-intensity and Short T1 Inversion Recovery (STIR) hyperintensity involving all metatarsals, most pronounced at the metatarsophalangeal joint regions, consistent with extensive osteomyelitis.



THE PATIENT UNDERWENT A LIMB SALVAGE PROCEDURE, WHICH INCLUDED:

- Sequestrectomy to remove necrotic and infected osteomyelitic bone
 - Tendon transfer of the peroneus longus to the peroneus brevis to offload the first metatarsal region
 - Tendo-Achilles lengthening to reduce forefoot plantar pressure
- Amputation was avoided, limb function was preserved, and ulcer recurrence was prevented.



OUTCOME

The procedure achieved effective infection control and biomechanical correction, resulting in:

- Successful avoidance of amputation
- Preservation of limb function
- Prevention of ulcer recurrence



05

Tamil Nadu's First Pulsed Field Ablation for Heart Rhythm Disorder



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INTRODUCTION

Atrial Fibrillation represents a leading cause of stroke and heart failure, traditionally requiring conventional ablation methods that rely on extreme thermal energy. The introduction of Pulsed Field Ablation (PFA) marks a next-generation leap in electrophysiology, utilising ultra-short electrical pulses to selectively target abnormal heart tissue while entirely sparing the surrounding anatomical structures.

CLINICAL PRESENTATION

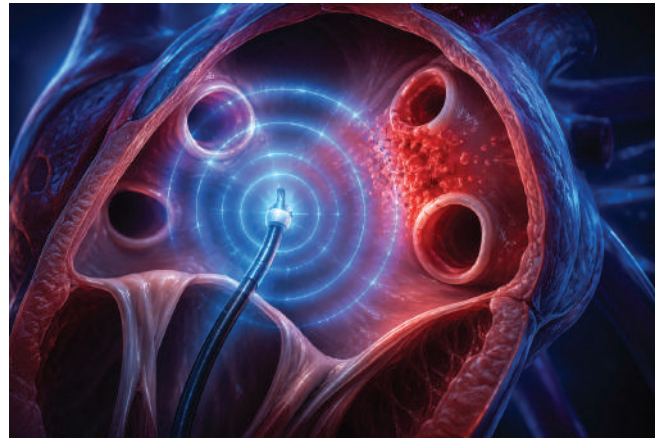
A 73-year-old female presented with a serious, long-standing heart rhythm disorder. Despite being managed with multiple medications, she experienced frequent episodes of rapid heartbeat, severe breathlessness, and progressively worsening heart failure. Given her advanced age and complex clinical state, she required a highly precise intervention that minimised procedural risks.

INVESTIGATIONS AND DIAGNOSIS

Clinical and electrophysiological evaluation confirmed a severe heart rhythm disorder (Atrial Fibrillation) driving her heart failure symptoms. Standard thermal ablation techniques (using extreme heat or cold) posed a higher risk of collateral damage to critical nearby structures, such as the oesophagus, blood vessels, and nerves. She was identified as an ideal candidate for a non-thermal, tissue-selective strategy.

TREATMENT

The patient underwent Tamil Nadu's first successful Pulsed Field Ablation (PFA) procedure. Utilising a minimally invasive endovascular approach, a thin catheter was carefully guided to the heart via a groin vein access point. Ultra-short electrical pulses were delivered to precisely isolate and ablate the abnormal heart tissue responsible for the arrhythmia without causing any thermal injury to neighbouring tissues.



POSTOPERATIVE OUTCOME

The procedure was completed with absolute success, seamlessly restoring a normal sinus rhythm. The patient made an excellent, rapid recovery and experienced a significant, immediate improvement in her symptoms of breathlessness and rapid heart rate. Her long-term risk of future stroke or heart failure complications was substantially reduced, and she was discharged in stable condition.



CLINICAL SIGNIFICANCE

This landmark case represents the inaugural use of Pulsed Field Ablation in Tamil Nadu, establishing a new paradigm for safe cardiac electrophysiology. By demonstrating that PFA delivers unmatched tissue-selectivity and avoids thermal complications, this milestone proves that even elderly, high-risk patients with complex heart conditions can safely achieve durable rhythm management, redefining the safety standards for advanced cardiac care.

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YEARS
**HEALTH &
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