



# Advanced Stent Procedure at AIIMS Bhopal for Complex Heart Defect



## What Happened

Doctors at AIIMS Bhopal successfully treated a rare and complex congenital heart defect – sinus venosus atrial septal defect (ASD) – using an advanced, specially designed covered stent. This minimally invasive procedure is considered highly challenging and marks a significant achievement for interventional cardiology in India.

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## About the Condition

- Sinus venosus ASD is an uncommon type of atrial septal defect where abnormal blood flow occurs between the heart's upper chambers, often associated with abnormal pulmonary vein drainage.
  - Traditionally, the treatment of choice is open-heart surgery under cardiopulmonary bypass, which carries higher risks and longer recovery.
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## The Procedure

- The AIIMS Bhopal team used a specially engineered covered stent to close the defect.
- A unique challenge was that one of the pulmonary veins drained near the defect site.
- To preserve its function, doctors left the stent uncovered at that segment and used a narrow catheter technique for precision placement.
- The intervention was carried out in the cardiac catheterization lab without open-heart surgery.

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## Why This Matters

- Minimally invasive alternative to open-heart surgery.
- Reduced hospital stay and quicker recovery for the patient.
- Demonstrates India's growing expertise in advanced cardiac interventions.
- Expands the possibility of using customized stents for other complex congenital heart defects.

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## Expert Views

- Cardiologists at AIIMS Bhopal highlighted this as a landmark procedure for central India.
- They noted that such precision stent techniques are rarely attempted outside specialized centers.
- Experts believe this approach may set the stage for wider adoption of stent-based closure of complex ASDs in India.

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## Broader Context

- India faces a large burden of congenital heart disease (CHD), with nearly 2–3 lakh infants born annually with heart defects.
- Minimally invasive interventions can improve access, reduce risks, and cut treatment costs compared to surgery.
- This success adds to India's advancing reputation in cardiology innovations, alongside earlier milestones in valve replacements and structural heart disease interventions.