

THE EXCHANGE

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Clinical Innovations

New Milestones

Better Outcomes

Cover Feature

Robotic Removal of a Giant Presacral Dermoid Cyst in a Nonagenarian

Complex Case Managed with Advanced Robotic Precision at Medanta Patna



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Feature Story

Medanta - Patna

Robot-Assisted Excision of a Giant Presacral Dermoid Cyst in a Nonagenarian

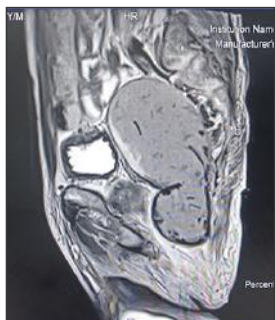
Presacral tumours are uncommon and often remain clinically silent until they attain a large size due to their deep pelvic location. Surgical excision is the treatment of choice; however, management becomes challenging in elderly patients, particularly in the presence of large lesions with close rectal and pelvic floor relations.

Case Study

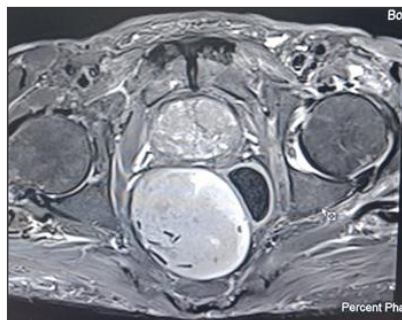
A 96-year-old male, an active farmer by occupation, presented to Medanta – Patna with lower abdominal discomfort and constipation. Clinical evaluation and imaging suggested a large presacral mass causing significant rectal compression.

Contrast-enhanced MRI showed a well-defined, bilobulated cystic lesion in the presacral and precoccygeal region, extending into the retroanal space and measuring approximately 12–15 cm in maximum dimension. The lesion was compressing and displacing the rectum anteriorly and laterally, without obvious mucosal involvement.

USG-guided core biopsy was suggestive of a dermoid cyst.



Axial view showing presacral mass



Sagittal view showing presacral mass

Given the large size of the lesion and associated rectal compression, surgical excision was planned. Despite advanced age, the patient was functionally active with no significant comorbidities and was deemed fit for surgery following pre-anaesthetic evaluation.

A minimally invasive robotic approach was chosen to allow precise dissection in the deep pelvis, with the aim of minimising blood loss and facilitating early recovery.

Surgical Intervention

Robot-assisted excision of the presacral mass was performed via a transabdominal approach under general anaesthesia with epidural support.

Intraoperatively, a large cystic mass occupying the pelvis was identified, extending from the presacral space across the pelvic floor into the retroanal region. The lesion was densely adherent to the rectum along its length and to the right lateral pelvic wall, with displacement of the rectum towards the left.

Dissection was carried out in the presacral plane, and the mass was separated from surrounding structures with minimal intraoperative blood loss. In view of a patulous pelvic floor and involvement near the anorectal sling, a decision was taken not to excise the perineal component completely in order to preserve continence. The cyst was divided proximal to the anorectal sling, and the accessible component was excised.

The cyst contained thick sebaceous material, which was evacuated, followed by thorough irrigation. A pelvic drain was placed, and the specimen was sent for histopathological examination.

Post-Operative Course

The patient had an uneventful immediate recovery and was initially monitored in the intensive care unit. He developed transient behavioural changes with sleep disturbance in the early post-operative period, for which psychiatric evaluation was sought and managed conservatively. His condition improved, and he was subsequently stepped down to a monitored unit.

Outcome

The patient had an uneventful recovery with resolution of presenting symptoms. He was ambulant and resumed routine daily activities. There was no bowel or bladder dysfunction in the post-operative period.

Histopathological examination confirmed a dermoid cyst with no evidence of malignancy.

Discussion

Presacral dermoid cysts are rare and may remain undetected until they reach a considerable size. Surgical excision can be challenging, particularly in large lesions with close relation to the rectum and pelvic floor.

The robotic approach provides better visualisation and instrument control in the deep pelvis, which is particularly useful in such cases. In the present case, it enabled careful dissection of a large lesion adherent to the rectum, with minimal blood loss.

An important intraoperative consideration was preservation of continence. Given the involvement near the anorectal sling and a patulous pelvic floor, a limited resection strategy was adopted, balancing adequate excision with functional preservation.

Conclusion

Robot-assisted surgery is a feasible and effective approach for large presacral tumours, even in elderly patients. Careful intraoperative judgement, with emphasis on anatomical and functional preservation, is essential for achieving favourable outcomes.

Dr. Sundeep Kumar

Associate Director - Surgical Oncology
Medanta - Patna



Case Study

Medanta - Lucknow

Robotic Cholecystectomy in a 5-Year-Old Child with Symptomatic Cholelithiasis

Gallstone disease in children is relatively uncommon but increasingly recognised due to improved imaging and evolving risk factors. Symptomatic cholelithiasis requires surgical management, with laparoscopic cholecystectomy being the standard approach. In selected paediatric patients, robotic assistance may offer technical advantages in terms of precision and control within a limited operative field.

Case Study

A 5-year-old male child presented to Medanta – Lucknow with a two-month history of recurrent right upper abdominal pain associated with post-prandial vomiting. There was no history of jaundice, fever, or haemolytic disorder. On examination, the child was haemodynamically

stable with mild tenderness in the right hypochondrium.

Ultrasound of the abdomen demonstrated multiple gallstones with acoustic shadowing within the gallbladder. The gallbladder wall thickness was normal, and the common bile duct was of normal calibre. Liver function tests were within normal limits. A diagnosis of symptomatic cholelithiasis was established, and the patient was planned for surgical intervention.

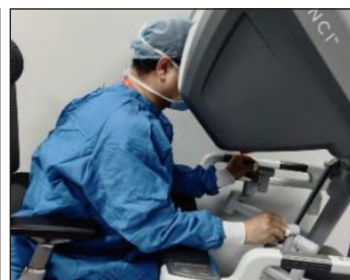
Surgical Management

The patient underwent robotic cholecystectomy under general anaesthesia using the da Vinci robotic platform. Port placement was carefully planned in view of the smaller abdominal domain to ensure optimal instrument positioning and avoid external arm collision.

Following docking, dissection was performed under high-definition three-dimensional visualisation. Calot's triangle was approached with meticulous technique, and the critical view of safety was achieved prior to division. The cystic duct and artery were clipped and divided in a controlled manner. The gallbladder was dissected from the liver bed using precise energy application with minimal traction, ensuring haemostasis and limiting tissue trauma. The specimen was retrieved through the umbilical port. The procedure was completed without intraoperative complications.



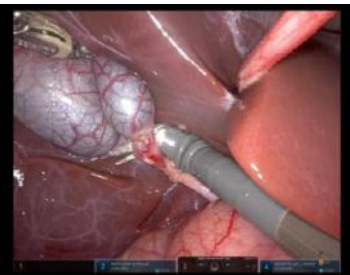
Port placement demonstrating minimal access surgery in a paediatric patient



Surgeon operating from the robotic console



Intraoperative robotic view of gallbladder dissection



Critical view of safety during robotic cholecystectomy

Outcome

The postoperative course was uneventful. Oral feeds were initiated within six hours, and the child had minimal postoperative pain. The patient was discharged on postoperative day one. Histopathological examination confirmed chronic cholecystitis with cholelithiasis. The child remains asymptomatic on follow-up.

Discussion

Laparoscopic cholecystectomy remains the standard of care in paediatric patients; however, operative constraints related to limited working space and instrument manoeuvrability can pose technical challenges, particularly in younger children. The robotic platform provides enhanced three-dimensional visualisation, tremor filtration, and wristed instrumentation, facilitating precise dissection in confined anatomical spaces.

In this case, robotic assistance enabled controlled dissection of Calot's triangle and reliable attainment of the critical view of safety with minimal tissue trauma. Careful preoperative planning, particularly with respect to port placement, and meticulous console execution were essential in adapting the procedure to paediatric anatomy.

With increasing experience and appropriate patient selection, robotic cholecystectomy represents a viable minimally invasive option in children, particularly where surgical precision is critical.

Dr. Shyamendra Pratap Sharma

Senior Consultant - Paediatric Surgery
Medanta - Lucknow



Case Study

Medanta - Gurugram

Deep Brain Stimulation in Advanced Parkinson's Disease

Clinical Recovery in a 53-Year-Old Patient, Advancing DBS Access For North East India

Parkinson's disease is a progressive neurodegenerative

disorder characterised by tremor, rigidity, bradykinesia and postural instability. In advanced stages, patients often develop motor fluctuations and dyskinesias that remain refractory to optimised pharmacological therapy, significantly affecting daily functioning and quality of life.

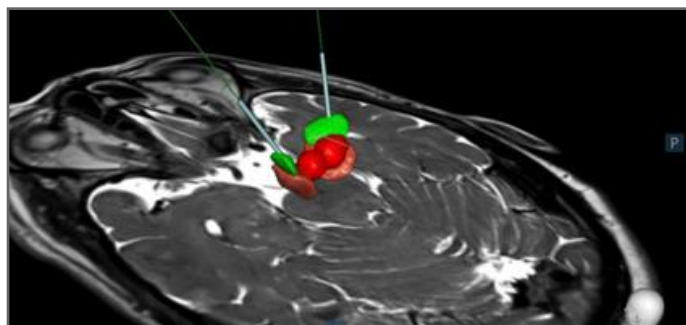
This case demonstrates the impact of DBS in a patient from North East India, highlighting how expanding neurosurgical services and specialised DBS expertise in regional centres can facilitate timely assessment and management of complex cases, offering meaningful improvements in motor control and overall quality of life.

Case Summary

A 53-year-old patient from Tripura with a 10-year history of Parkinson's disease presented with progressively worsening tremor, rigidity, bradykinesia and disabling "OFF" periods. Despite optimal dopaminergic therapy, these motor complications significantly affected daily activities, independence, and quality of life.

Following multidisciplinary assessment, the patient was considered for DBS. Given the persistence of motor fluctuations and dyskinesias, deep brain stimulation strategy was planned to allow real-time modulation of therapy, optimising symptomatic relief while minimising side effects. The procedure involved stereotactic placement of electrodes in the bilateral subthalamic nucleus, guided by neuroimaging and intraoperative monitoring. The electrodes were connected to an implantable pulse generator, which delivered targeted electrical stimulation to modulate abnormal neural circuits responsible for motor symptoms. Post-operative programming was gradually optimised over several weeks to achieve the best balance of symptom control and functional improvement.

The patient demonstrated a marked reduction in "OFF" periods, improved mobility, and enhanced ability to perform daily tasks independently. Functional improvements were sustained over subsequent follow-ups, resulting in a significant positive impact on quality of life.

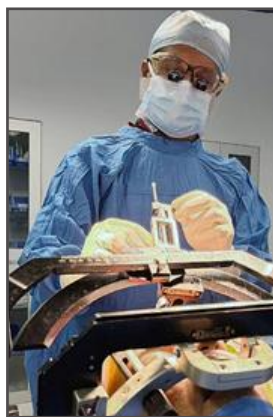


SureTune4 MRI post-operative image reveals satisfactory implantation of bilateral deep brain stimulation electrodes within the right & left motor sub-thalamic nuclei (depicted in 'green')

Clinical Significance

This case highlights the transformative effect of DBS in advanced Parkinson's disease, particularly for patients who remain refractory to medical therapy. It also represents a pioneering application of DBS for patients from North East India, illustrating how the growing availability of specialised neurosurgery services and DBS expertise in regional centres can support timely intervention for complex cases.

The successful management underscores both the clinical efficacy of DBS and the increasing accessibility of advanced neuromodulation therapies, enabling patients to achieve meaningful improvements in daily functioning and overall quality of life.



Dr. Anirban Deep Banerjee

Director - Neurosurgery
Medanta - Gurugram



Spotlight

Medanta Patna Launches Advanced Mother and Child Centre

Strengthening Comprehensive Maternal and Paediatric Care in Bihar

Medanta Patna has launched a dedicated Mother and Child Centre, further strengthening its capabilities as a 500-bed super speciality hospital in the region. The facility was inaugurated by Hon'ble Health Minister, Mangal Pandey.

The centre provides integrated maternal and paediatric care across the full continuum, from pre-conception counselling and antenatal care to safe deliveries, postnatal support and specialised neonatal services. Key infrastructure includes Labour Delivery Recovery

suites, a Level III NICU and established protocols for high-risk pregnancy management, supported by 24-hour emergency services.

A multidisciplinary approach ensures close coordination between obstetrics, gynaecology, neonatology and paediatric teams, enabling timely intervention and continuity of care for both routine and complex cases.

The neonatal unit is equipped to manage premature and critically ill newborns, including respiratory distress, sepsis and congenital conditions, supported by advanced life support systems and round-the-clock specialist care.

With access to paediatric super-specialities including cardiology, oncology, gastroenterology and neurology, Medanta Patna offers comprehensive child healthcare under one roof. This addition further strengthens its role as a regional referral centre for advanced maternal and child care.



Welcome Onboard



Dr. Amit Chaudhary

Director - CTVS
Medanta - Noida

Dr. Chaudhary specialises in minimally invasive cardiac surgery and heart failure surgery, including heart transplant and LVAD implantation. His expertise includes advanced aortic surgery, structural heart interventions, endovascular procedures and ECMO support.





Dr. Chandrasekhar Singha

Director - Paediatric Critical Care and
Paediatric Pulmonology
Medanta - Patna

Dr. Singha, with nearly 20 years of experience, specialises in paediatric critical care, managing critically ill children with respiratory and multi-organ failure, with expertise in ECMO, point-of-care ultrasound and paediatric bronchoscopy.



Dr. Anil K Sheorain

Senior Consultant - Dental Sciences
Medanta - Gurugram

Dr. Sheorain specialises in oral and maxillofacial surgery and implantology, with expertise in dental implants and reconstructive procedures.



Dr. Gagan Pal Singh

Associate Director - Critical Care
Medanta - Noida

Dr. Singh specialises in cardiothoracic anaesthesia and critical care, managing complex cardiac surgeries including heart transplant, LVAD implantation, and ECMO support. He brings expertise in advanced perioperative and multidisciplinary critical care.



Dr. Syed Daud Ali

Consultant - CTVS
Medanta - Noida

Dr. Ali specialises in coronary, valve and aortic diseases, with expertise in bypass surgery, valve procedures and endovascular interventions.



Dr. Parjeet Kaur

Associate Director - Endocrinology and
Diabetes
Medanta - Gurugram

Dr. Kaur specialises in diabetes management, thyroid and parathyroid disorders, PCOS, and complex endocrine conditions including pituitary and adrenal disorders.



Dr. Ashis Kumar Choudhary

Consultant - Gastroenterology
Medanta - Gurugram

Dr. Choudhary specialises in advanced endoscopy (ERCP, EUS) and pancreatico-biliary and liver disorders.



Dr. Girish Gangwal

Associate Director - Internal Medicine
Medanta - Patna

Dr. Gangwal specialises in comprehensive internal medicine care, with expertise in infectious, respiratory, metabolic and complex systemic disorders.



Dr. Kamendra Singh Pawar

Consultant - Respiratory and Sleep
Medicine
Medanta - Patna

Dr. Pawar specialises in pulmonary and sleep disorders, including advanced bronchoscopy (EBUS, thoracoscopy).



Dr. Pankaj Kumar Gupta

Consultant - Gastroenterology
Medanta - Gurugram

Dr. Gupta specialises in advanced therapeutic endoscopy, including third space endoscopy, and management of complex GI disorders.





Dr. Parmod Mittal

Principal Consultant - Nephrology and
Kidney Transplant Medicine
Medanta - Gurugram

Dr. Mittal specialises in chronic kidney disease, dialysis, renal transplantation and complex nephrology care.



Dr. Vivek Ahuja

Associate Consultant - Gastroenterology
Medanta - Gurugram

Dr. Ahuja specialises in hepatology and therapeutic endoscopy, with expertise in complex gastrointestinal and liver disorders.



Dr. Ridhima Dhamija

Consultant - Dental Sciences
Medanta - Gurugram

Dr. Dhamija specialises in conservative and cosmetic dentistry, with expertise in restorative procedures and smile designing.



Dr. Sameeksha

Visiting Consultant - Paediatrics
Medanta - Gurugram

Dr. Sameeksha specialises in general paediatrics, focusing on childhood infections, growth and immunisation.



Dr. Younis Majid Khan

Associate Consultant - Orthopaedics
Medanta - Gurugram

Dr. Khan specialises in joint replacement, arthroscopy and management of complex fractures and sports injuries.



Dr. Ashish Sagar Tyagi

Associate Consultant - CTVS
Medanta - Noida

Dr. Tyagi specialises in adult and congenital cardiac surgery, thoracic and vascular trauma, and critical care management.



Dr. Abhishek Kumar

Associate Consultant - Gastroenterology
Medanta - Ranchi

Dr. Kumar specialises in endoscopy (colonoscopy, ERCP) and hepatobiliary and pancreatic disorders.



Dr. C. H. Nishanth Kumar

Associate Consultant - Paediatric
Neurology
Medanta - Patna

Dr. Kumar specialises in paediatric neurological disorders, with expertise in EEG, EMG and nerve conduction studies.



Dr. Abhishek Pratap Singh

Associate Consultant - Nephrology
Medanta - Patna

Dr. Singh specialises in nephrology and kidney transplantation, including dialysis and interventional procedures.



Dr. Raja Avinash

Associate Consultant - Cardiac Anaesthesia
Medanta - Patna

Dr. Avinash specialises in cardiac anaesthesia and perioperative care, with expertise in complex cardiac surgeries.





Dr. Narayan

Associate Consultant - Neurosurgery
Medanta - Patna

Dr. Narayan specialises in brain and spine disorders, with expertise in advanced neurosurgical procedures.



Dr. Sapna Meena

Associate Consultant - Dermatology
Medanta - Patna

Dr. Meena specialises in clinical and aesthetic dermatology, with expertise in acne, pigmentation and hair disorders.



Dr. Sudhanshu Goyal

Associate Consultant - Peripheral Vascular
and Endovascular Sciences
Medanta - Gurugram

Dr. Goyal specialises in vascular and endovascular surgery, including arterial and venous disorders and aortic aneurysms.



Dr. Swapnil Kumar

Associate Consultant - Neonatology
Medanta - Patna

Dr. Kumar specialises in neonatal and paediatric care, with expertise in neonatal ventilation and critical newborn care.



IN CASE OF **EMERGENCY** DIAL **1068**

Medanta Network

Hospitals

Medanta - Gurugram

Sector - 38, Gurugram, Haryana | Tel: 0124 4141 414 |
info@medanta.org

Medanta - Lucknow

Sector - A, Pocket - 1, Sushant Golf City,
Amar Shaheed Path, Lucknow | Tel: 0522 4505 050

Medanta - Patna

Jay Prabha Medanta Super-Speciality Hospital,
Kankarbagh Main Road, Kankarbagh Colony, Patna
Tel: 0612 350 5050

Medanta - Ranchi

Medanta Abdur Razzaque Ansari Memorial Weavers,
P.O. Irba, P.S. Ormanjhi, Ranchi | Tel: 1800 891 3100

Medanta - Hospital, Ranchi
NH 33, P.O. Irba, P.S. Ormanjhi, Ranchi | Tel: 1800 891 3100

Medanta - Indore

Plot No. 8, PU4, Scheme No. 54, Vijaynagar Square,
AB Road, Indore | Tel: 0731 4747 000

Medanta - Noida

Plot No. F-16, Block-F, Sector 50, Noida,
Gautam Buddha Nagar, U.P. | Tel: 0120 3141 414

Mediclinics

Defence Colony

E - 18, Defence Colony, New Delhi | Tel: 011 4411 4411

Cybercity

UG 15/16, DLF Building 10 C, DLF Cyber City,
Phase II, Gurugram | Tel: 0124 4141 472

Subhash Chowk

Plot No. 743P, Sector - 38, Subhash Chowk,
Gurugram | Tel: 0124 4834 547

Cyber Park

Shop No. 16 and 17, Tower B, Ground Floor,
DLF Cyber Park, Plot No. 405B, Sector-20, Udyog
Vihar, Gurugram | Tel: 93541 41472

Golf Course Road

562 SP, Sector 27, Golf Course Road,
Gurugram | Tel: 0124 6930 099

Ranchi

Shah Corporate, Kutchary Road, Opp. Atal Smriti
Vendor Market, Ranchi | Tel: 1800 891 3100

Medanta Helpline: 88-0000-1068

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