

Interactive Case:

Sacral Chordoma Resection – Anterior Video-Assisted Laparoscopic Approach

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Medical History: A 66-year-old female patient presented with recurrent low back pain radiating to the lower limbs for 2 years. She underwent imaging studies, oncologic staging, and biopsy, which confirmed the diagnosis of sacral chordoma involving the S2 level and below.



a. Significance & Hypothesis: Primary sacral tumors represent a significant challenge in orthopedic oncology because of their rarity, frequently delayed diagnosis, and the complex anatomy of the region. The proximity to critical neural, vascular, and visceral structures makes achieving adequate oncologic margins technically demanding and increases the risk of complications. Although advances in imaging modalities have improved staging and diagnostic accuracy, many patients still present with large-volume lesions and advanced local involvement.

Problems and Challenges: To reduce mortality and morbidity through a multidisciplinary approach, while minimizing bleeding and postoperative complications.

b. Innovation: The anterior approach was assisted by the general surgery team, which used videolaparoscopy to perform anterior dissection of the intrapelvic vessels, mainly ligating branches of the internal iliac arteries bilaterally, and initiating the anterior dissection to allow a safer posterior approach. This strategy minimized complications related to intraoperative bleeding through the posterior approach and reduced complications associated with bowel adhesions and rectal mobilization.

c. Approach: For extensive lesions involving sacral tumors, especially at levels above S2 or below S3 but with marked anteroposterior or laterolateral extension, we performed the anterior approach by videolaparoscopy with a multidisciplinary team involving general surgery, gynecology, and colorectal surgery.

d. Results: The 66-year-old patient underwent complete resection of the sacral chordoma from the S2 level downward. She is currently 3 years and 6 months postoperative, with no recurrence of disease, no metastases, and partial anal and bladder sphincter control. (MSTS score: 75).



