Pain Management of a Giant Sacral Tumor: A Challenging Case Review

Harshika Chowdhary, MD

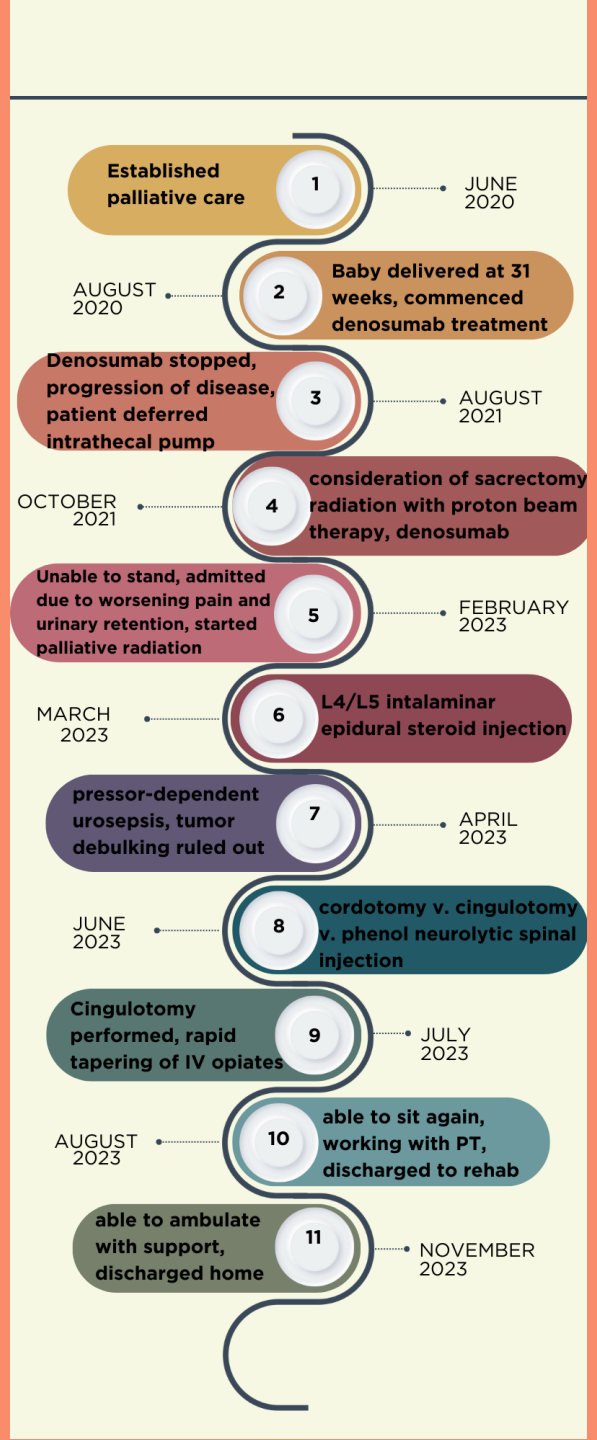
Yale Anesthesiology, PGY-2

Mentor: Dr. Ruchi Sharma, MD

Yale

Patient Introduction:

- 3/2020: 27-year-old female presents during her **25th week of pregnancy** with **lower back pain radiating down her leg.**
- Due to persistent pain, she is imaged 2 months later and found to have a **giant cell sacral tumor at S2-S4** centered in the bones at the sacro-coccygeal junction, confirmed by biopsy.
- Symptoms: b/l lower back pain radiating to b/l lower extremities, perineal pain, **bladder/bowel incontinence**

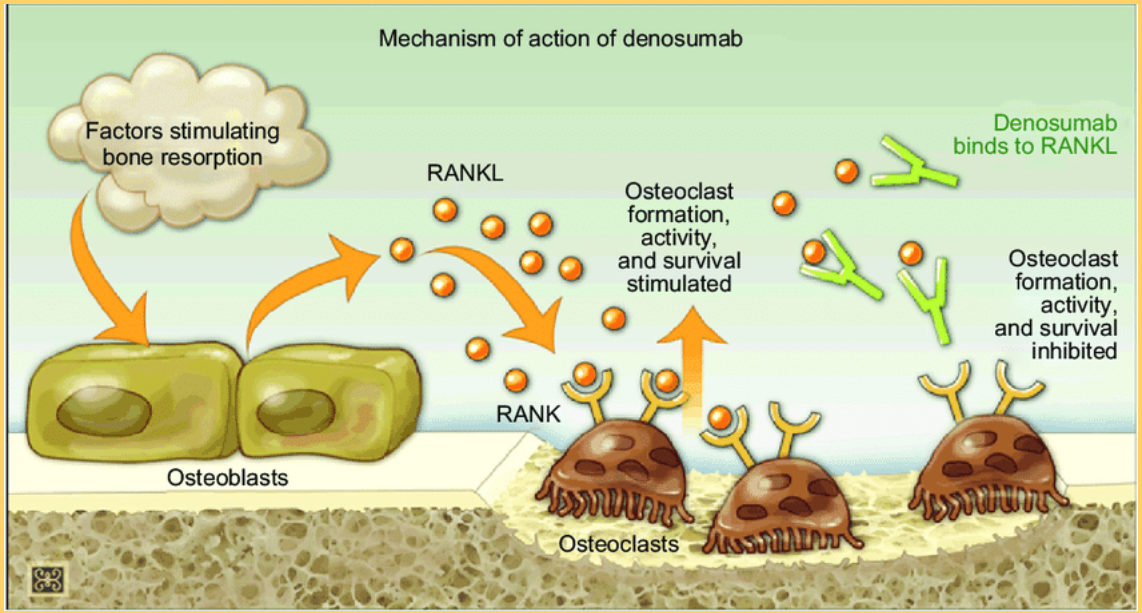


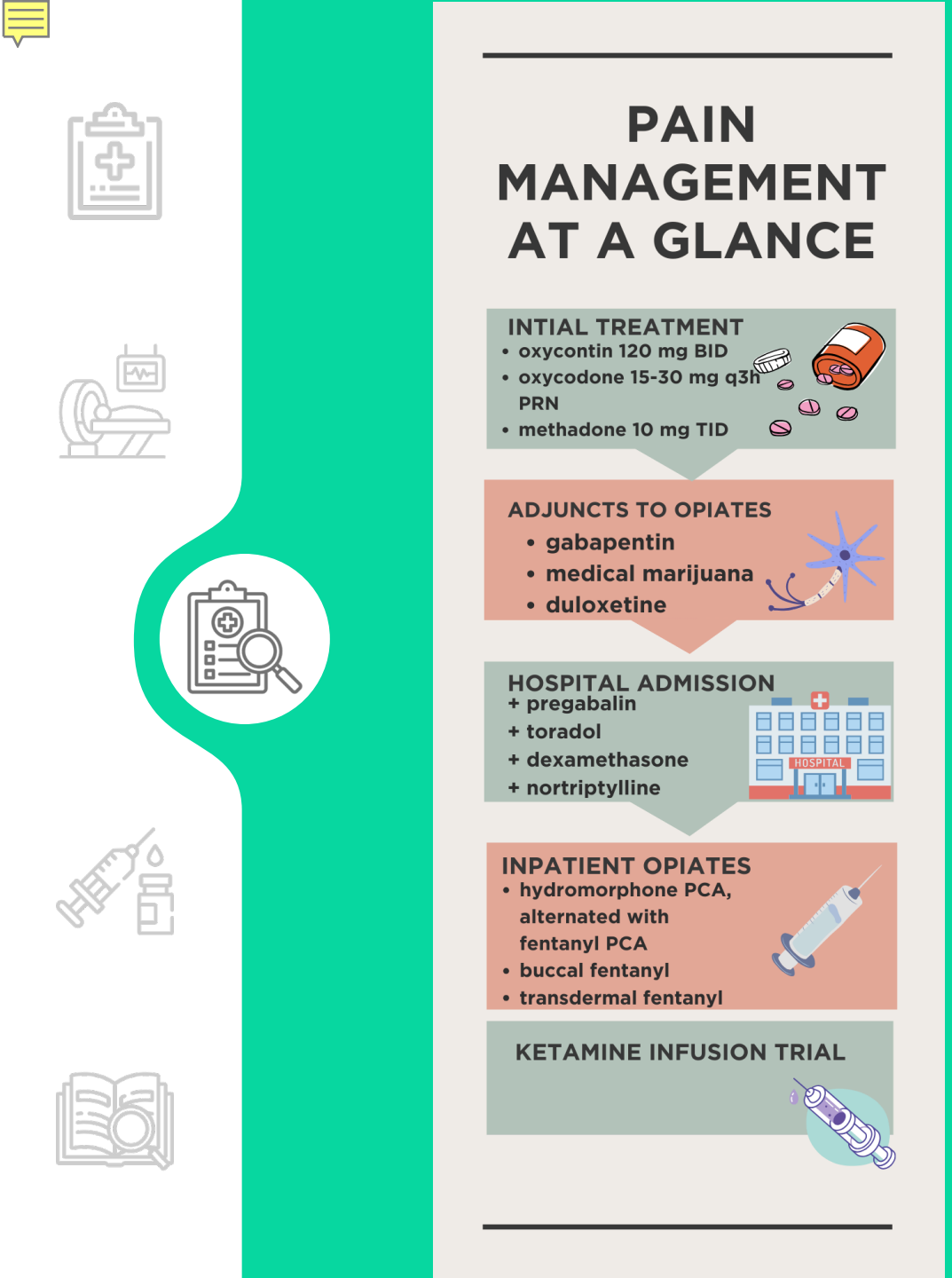
Giant Cell Tumor of the Sacrum

- Primary intramedullary, **BENIGN** tumor of the bone
- Mostly occurs in the epiphysis/metaphysis of the **femur or tibia**
- Only **2-8% are located in the sacrum**
- Locally aggressive, rarely metastasizes (lungs)
- Diagnosis via imaging and biopsy
- Occurs in **younger patients, age 20-45**
- High risk of recurrence
- Due to location of the sacral tumor, **pain management is difficult**.
- Gap in the literature describing management of sacral giant cell tumors

Treatment Options:

- **Surgical resection/curettage with cementation**
- **Embolization**
- **Denosumab**
- **Radiation therapy**
- Novel therapy: topical/systemic bisphosphonates, cryoablation

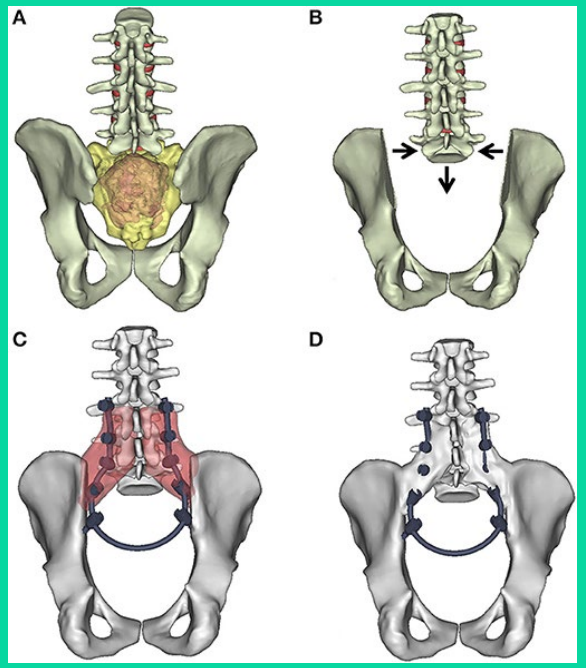




- **Opiates (IV and PO), NSAIDs, neuropathic pain agents, corticosteroids** have been reported to be used to manage pain in other case reports of patients with giant cell sacral tumors.

Other Treatment Considerations:

- **Intralaminar L4-L5 epidural steroid injection**
- **Sacrectomy**
- **Intrathecal pump**
- **Cordotomy**
- **Phenol neurolytic spinal**

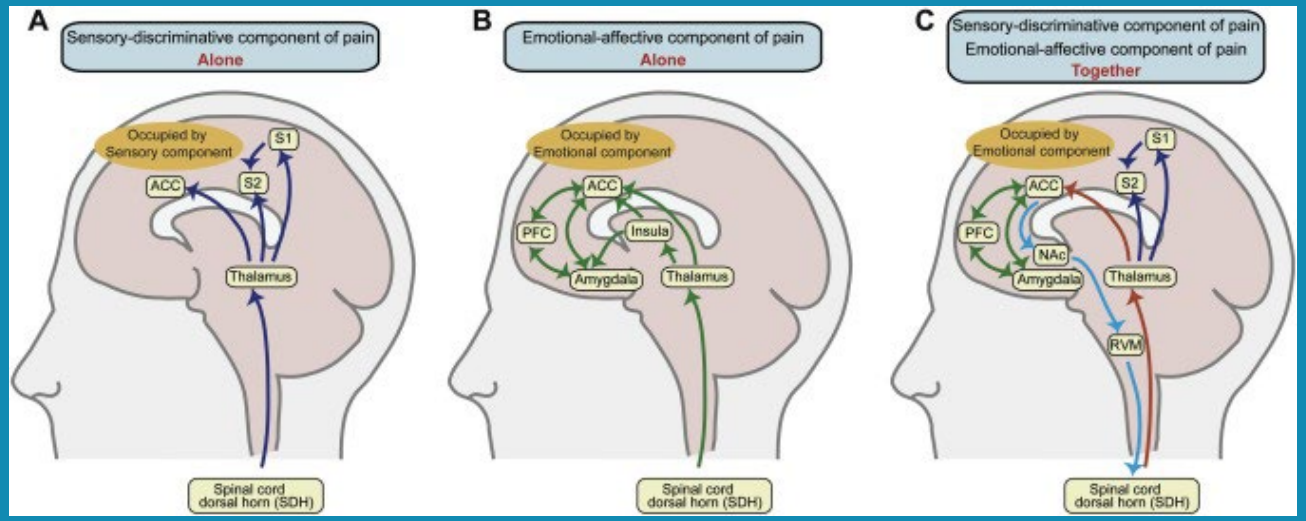


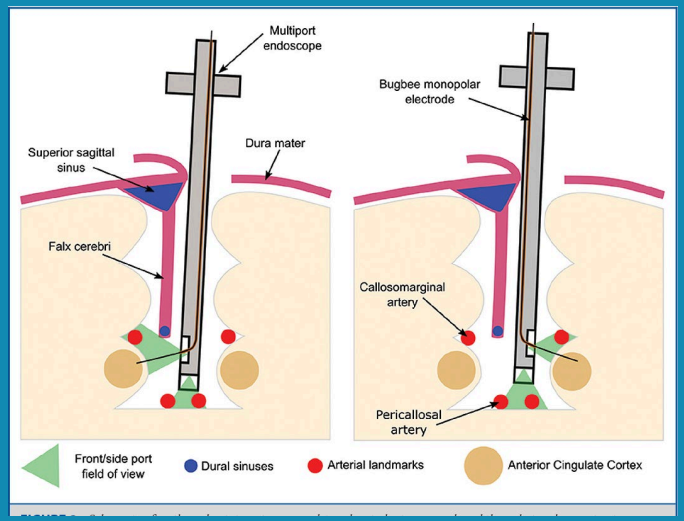
Anterior Cingulotomy

- **Anterior cingulate cortex,** a part of the limbic system, processes the perception of pain through emotional reaction and attention to pain.

- **Anterior cingulotomy** has been used for decades as a treatment for **chronic, medically refractory pain, both cancer and non-cancer pain**.

- Adverse Effects:
  - Transient (days): post-operative confusion, urinary incontinence, headaches, fever
  - Permanent: hemiparesis, hemorrhage, seizures (mostly in cingulotomies done without MRI guidance)





Aftermath

- Today, the patient is taking
  - **Methadone 10 mg TID**
  - **Oxycodone 90 mg q3h PRN (reports only taking 3-4 doses a day)**
  - **Gabapentin 800 mg TID**
  - **Nortriptyline 75 mg QHS**
  - **Pregabalin 200 mg q8h**
- Pain rating: 5/10
- Able to ambulate with support
- **Living at home**

THANK YOU!

Please scan QR code for references.