

Retrograde Intrathecal Catheter Placement for Refractory Perineal Pain in Metastatic Rectal Adenocarcinoma and Radiation Proctitis

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INTRODUCTION & BACKGROUND

- Refractory anorectal cancer pain is complex due to somatic, visceral, and sympathetic innervation
- NCCN guidelines emphasize multidisciplinary management.[1,2]
- Intrathecal drug delivery (ITDD) provides targeted neuraxial analgesia, but optimal catheter positioning for distal sacral pain remains poorly defined.[3-5]
- We describe successful management of refractory metastatic rectal cancer pain using retrograde sacral intrathecal catheter placement.

CASE OBJECTIVE

To describe the clinical course and analgesic response to retrograde sacral intrathecal catheter placement for severe refractory rectal/perineal cancer pain after failure of multimodal pharmacologic therapy and ganglion of impar blockade.

METHODS & CASE DESCRIPTION

- Single Patient case report: no patient-identifiable information
- IRB exempt
- 40-year-old man with metastatic rectal adenocarcinoma & radiation dermatitis
- Severe rectal/perineal pain required hospitalization

CLINICAL COURSE PRIOR TO INTERVENTIONAL PAIN

- Multimodal pharmacologic therapy failed
- Opioid escalation limited by sedation, nausea, & constipation.
- Hospitalization prevented outpatient clinical-trial participation
- Pain control as the primary barrier to discharge

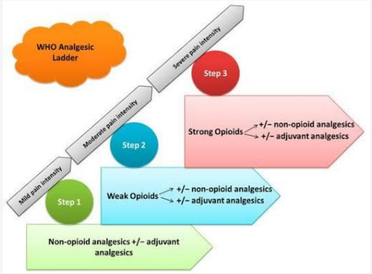


Figure 1: World Health Organization (WHO) stepwise analgesia approach

INTERVENTIONAL PAIN MANAGEMENT TIMELINE

Refractory pain	Sympathetic block	Trial	Definitive ITDD	Outcome
Multimodal meds + escalating opioids	Ganglion of impar → no meaningful relief	5-day caudal epidural catheter → substantial analgesia	L2–L3 access → retrograde catheter to S1	• PCA stopped • opioids ↓ • cancer therapy resumed

Table 1. Intrathecal Catheter Tip Location Based on Location of Pain.

Pain location	Vertebral body catheter tip location
Brachial plexus	C3-5
Arm	C3-5
Breast	T1-2
Upper chest wall	T3-4
Visceral abdomen	T5-6
Lower chest wall	T6-7
Abdominal wall	T6-7
Pelvis	T9-12
Leg	T10
Sacral	Vertebral body level corresponding to conus

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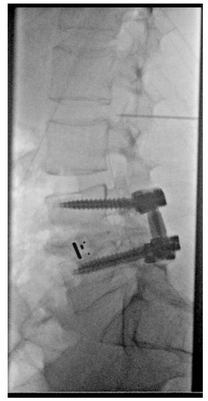


Figure 2: Lateral view showing L2-3 access

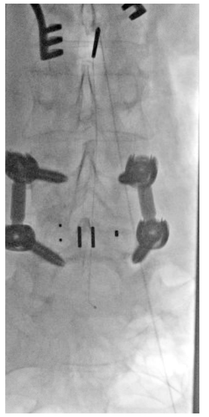


Figure 3: Catheter Tip at S1 Level

DISCUSSION & ANALYSIS

- Early multidisciplinary escalation
- ITDD is established for refractory cancer pain,[3,4] Retrograde sacral catheter placement infrequently reported.[5]
- Reducing opioid-related toxicity.[3,4]
- Limitations: single-patient

CONCLUSIONS

Retrograde sacral intrathecal catheter placement for perineal/rectal cancer pain:

- Feasible
- Effective (reduced systemic opioids & improved pain/function)
- Allows for cancer-directed therapy

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