

A Case Report on the Treatment of Intractable Anal Pain from Metastatic Carcinoma of the Cervix

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Abstract

Introduction: Cancer pain in the terminally ill often pose great therapeutic dilemma. Opioids, whilst being useful in most cases, often leaves a patient heavily sedated and constipated at high doses and sometimes, in persistent agony from cancer pain. **Clinical Picture:** An Indian lady who suffered from metastatic carcinoma of the cervix experienced tremendous pain and disability despite high doses of narcotics and membrane stabilisers. **Treatment:** A ganglion of impar block and superior hypogastric plexus block were performed with a neurolytic agent. **Outcome:** The patient's pain and opioids usage were markedly reduced. **Conclusion:** Neurolytic nerve block can offer a great therapeutic option in selected cancer patients.

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Introduction

Unremitting pain remained a primary therapeutic challenge in cancer patients. Both opioids and non-opioids are often the main stay of therapy for many. However, not uncommonly, there are groups of patients who would benefit from interventional procedures. We report here a patient who suffered from debilitating pain, despite maximal pharmacological treatment, but finally found respite after sympathetic block was administered.

"We must all die. But that I can save him from days of torture, that is what I feel as my great and ever new privilege. Pain is a more terrible lord of mankind than even death itself."

Albert Schweitzer, 1931

Case Report

In December 1994, a 41-year-old female Indian factory operator presented with per vaginal bleed of a few months. Subsequent work up revealed poorly differentiated carcinoma of cervix stage 2B. She completed a course of radiotherapy.

In August 1998, computed tomographic (CT) scan of the pelvis revealed that the tumour had invaded the rectal wall just above the cervix. Peritoneal secondaries were noted, with a mass in the right paraumbilical region and pouch of

Douglas; her liver was normal. She was treated with two courses of chemotherapy, and a diversion colostomy was done later in the same year.

In May 1999, she was admitted for perianal pain. She was treated with subcutaneous morphine 15 mg per day and oral morphine 2.5 mg for breakthrough pain. She was subsequently discharged with oral morphine 10 mg bd and haloperidol 2 mg with partial relief of her symptoms.

In July 1999, she was admitted for rectal bleed for which a chemoembolisation was done. She was still complaining of persistent rectal pain. Subcutaneous morphine 60 mg and haloperidol 2.5 mg per day were administered with partial relief. She was also started on amitriptyline 10 mg on and synflex 550 mg bd.

On 8 October 1999, she was admitted for severe rectal pain unrelieved with medications [visual analogue score (VAS) of 10/10]. By now, the rectal pain had immobilised her. She was on subcutaneous morphine 90 mg per day, haloperidol 2.5 mg and oral morphine 2.5 mg prn for breakthrough pain. Amitriptyline 10 mg on and phenytoin (epilim) chrono 500 mg were given, but the pain remained severe. Furthermore, she was suffering from increasing intestinal immotility and drowsiness, probably from the effects of the high dose morphine. She weighed about 40 kg.

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Treatment

On 12 October 1999, she was referred to us for pain control. We performed a superior hypogastric plexus and ganglion impar block under fluoroscopic guidance. It was performed with the patient prone, under aseptic technique, with adequate monitors and assistance. Two 22 G CIBA needles, one on each side, were inserted 6 cm from the midline at the level of L5, and advanced mesiad 15° and caudad 30° under fluoroscopic guidance to position just anterior to the sacral promontory. After confirming the position with contrast, 4 mL of phenol 2.5% with 4 mL lignocaine 1% was injected on each side. The needles were removed after flushing with normal saline.

Ganglion impar blockade was then performed with a slightly angled 20 G spinal needle. The needle was inserted at the anococcygeal membrane and directed at the sacrococcygeal junction. After confirming the position with contrast, 4 mL of phenol 2.5% with lignocaine 1% was injected. The needle was removed after flushing with normal saline. The patient achieved 50% pain relief (VAS of 6/10). The next day, ganglion impar block was repeated with 8 mL 70% alcohol.

Outcome

Complete relief (VAS 1/10) was noted on the same day of the neurolytic block. No complications, such as weakness of legs or discharge from puncture site, were noted. Fluoroscopy revealed a fistula connecting the presacral space with the rectum just prior to the block. Morphine requirement was markedly reduced. She was more cheerful, awake, with an improvement in appetite and intestinal motility.

On 15 October 1999, 2 days after the neurolytic therapy, the patient was ambulant and was discharged from the hospital. On follow-up on 21 October, she remained pain-free and ambulant. She required oral morphine only once every 1 to 2 days. No complication from the neurolytic block was noted. She passed away 3 months later, with minimal pain.

Discussion

Pain arising from disorders of the viscera and somatic structures within the pelvis and perineum is a frequent cause of discomfort and disability, especially in women. Such pain, if cancer in origin, often bears a greater psychosocial magnitude in the terminally ill.

The perineum comprises diverse anatomic structures with mixed sympathetic and somatic innervation. Although many different interventions have been proposed for the treatment of intractable perineal pain, their efficacy and applications are limited by the same factors that complicate

the management of pelvic pain i.e., compromise of bladder, bowel or even limb function.

Sympathetic nerve block is an accepted and widely practised method of regional pain control, particularly in the cancer patient when unremitting pain may be the primary therapeutic challenge. Characteristically, sympathetic perineal pain tends to be vague and poorly localised, and frequently is accompanied by sensations of burning and urgency. Although the anatomic interconnections of the ganglion impar are rarely described in any detail in even anatomic literature, it is probable that the sympathetic component of these pain syndromes derives, at least in part, from this structure.¹

Alcohol is the classic neurolytic agent and has been used extensively in concentrations of 50% to 95%. The effective duration lasts about 4 months or less. A disadvantage is that, fairly often, partial relief or brief relief is seen. Alcohol acts on the nervous system tissue by extraction of cholesterol, phospholipid and cerebroside, and causes precipitation of lipoproteins and mucoprotein. The primary effect of phenol is to coagulate proteins. It is similar to alcohol in its potency and non-selective damage to nervous system tissue. Low doses cause a transient conduction block, and higher doses cause an irreversible block by damaging axons. We had used phenol in the first instance as it caused less pain during injection compared to alcohol. We enhanced the block with alcohol on the following day as it conferred the advantage of more precise and definite blockade compared to phenol. Phenol provided a transient analgesic effect on the periphery of the lesion, which would wear off with time.

Many authors have discussed various techniques of performing neurolytic blocks at different locations, including lumbar sympathetic, coeliac and superior hypogastric. Previous therapeutic interventions were also limited to the female pelvis in the form of presacral neurectomy by the gynaecologists with a 50% success rate and limited duration of pain relief.¹

In 1990, Plancarte et al² reported on the ganglion impar block for relief of pelvic pain with excellent results. Following neurolytic blockade, 8 patients experienced complete (100%) relief of pain, and the remainder 8 patients experienced significant reduction in pain. Blocks are repeated in 2 patients with further improvements. The main problem reported was limited to difficulty in needle passage in 1 patient with rectal cancer, secondary to tumour involvement. Comparatively, pharmacological treatment in these patients had only resulted in 30% global reduction in pain.

A report by Plancarte et al³ on 20 patients using 10% phenol, 8 mL volume, resulted in 70% improvement of

pain for 3 to 12 months. The somatic component of the pain was reduced by supplementing with epidural steroids and diluted (2% to 3%) phenol. All the patients had advanced carcinoma: cervical, prostate, testicular and rectal. The only significant complication was vascular puncture. Bilateral injections were done for midline pelvic pain. Waldman et al⁴ reported their results modifying this technique to include transvascular and transdiscal and a single-needle CT-guided approach.

The ganglion impar, also known as ganglion of Walther, is a retroperitoneal structure at the caudal end of the sympathetic chain. This ganglion lies immediately in front of the sacrococcygeal junction. Plancarte described the technique which includes raising a skin wheal at the level of the anococcygeal ligament and the subsequent placement of a previously bent 3.5 inch, 22 G spinal needle directed cephalad, with a finger in the anal orifice to prevent perforation. The bend allows the needle to fall into a correct position from the distal starting point. Good results and the absence of complications have been reported for treatment of perineal pain in patients with cancer of the cervix, colon, bladder, rectum and endometrium. We used this technique of pain relief, coupled with superior hypogastric block, and successfully relieved the agony of cancer pain for our patient.

In 1995, Wemm et al⁵ described a modified approach consisting of trans-sacrococcygeal ligament placement of the needle, with similar success, and avoided the invasion of the more caudal structures.

In 1990 and 1997, Plancarte et al^{6,7} reported neurolytic superior hypogastric plexus block for chronic pelvic pain associated with cancer. They reported effective pain relief and a significant reduction in opioid usage in 72% of the patients who received the neurolytic block. The autonomic nervous system is clearly involved in painful syndromes. The hypogastric plexus block has not been used in less invasive block therapies that can readily be repeated and carry fewer complications than the presacral neurectomies. Pain fibres that travel through the hypogastric plexus bypass lower spinal cord. Therefore, the usual spinal and epidural nerve blocks are ineffective in providing adequate pain relief. Pelvic pain may travel through a number of pain pathways including the sympathetics through the coeliac ganglion and splanchnic nerves, in addition to the spinal cord, which further explains the failure of lumbar epidural nerve blocks.

Common indications for superior hypogastric plexus block include the cancer patient and the intractable non-cancer pain patient. In patients with pelvic pain that tends to respond favourably to superior hypogastric plexus block, tenderness can be elicited by putting pressure on the ischial tuberosity (Racz sign)⁸ and these patients commonly

complain of pain while sitting, similar to the complaint made by our patient.

The superior hypogastric plexus, in continuity with the coeliac plexus and lumbar sympathetic chains, is a retroperitoneal structure located bilaterally at the level of the lower third of the fifth lumbar vertebral body and upper third of the sacral promontory and near the bifurcation of the common iliac vessels.⁹⁻¹¹ Via the hypogastric nerves, the plexus innervates the following pelvic viscera: descending colon and rectum, vaginal fundus and bladder, prostate and prostatic urethra, testes, seminal vesicles, uterus and ovary. We had chosen to employ both superior hypogastric and ganglion impar block on the first day as it would most likely confer a more complete blockade compared to a single ganglion impar block. The blockade was enhanced on the following day with another ganglion impar block. In our opinion, our patient did not have the luxury of time and using such an approach was more favourable compared to the use of a single ganglion impar block. A combined block was selected in the hope of relieving the patient's pain and improving the quality of life in her remaining days.

The difficulty we encountered was mainly in the positioning of the patient, as she hardly had any strength to move on her own and each movement was accompanied with great pain and agony. As such, adequate manpower to help in positioning was important. We undertook a number of precautions: firstly, strict asepsis as such patient had poor wound healing and would be prone to infection. Secondly, precise location of the target nerve plexuses must be obtained with the aid of fluoroscopy and contrast, so as to prevent untoward complications from inadvertent injections into blood vessels and visceral organs. Thirdly, as analgesia set in from the blockade, there might be a relative overdose effect if she were to continue her current opioid usage. As such, close monitoring with a pulse oximeter after the procedure was important.

Other therapeutic options that may also be considered in the management of intractable pelvic pain include lumbar sympathetic block, epidural block, intraspinal block and neurosurgical approaches.

Conclusion

Interventional procedures, while often not the first-line treatment for cancer pain, can offer the terminally ill an effective therapeutic option and improve the patient's quality of life, as illustrated in this case report.

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