

## Pain Management in a Patient with Pancreatic Cancer and Substance Use Disorder

Gülçin Şenel, Gonca Oğuz<sup>1</sup>, Nesteren Koçak and Nihal Kadioğulları

Department of Anesthesiology, Pain and Palliative Care Clinic: Dr AY Ankara Oncology Education and Research Hospital, Turkey

**Corresponding author:** Gonca Oğuz, Department of Anesthesiology, Pain and Palliative Care Clinic: Dr AY Ankara Oncology Education and Research Hospital, Turkey, Tel: +90-312-3360909/5053; E-mail: goncatuncel@hotmail.com

**Received date:** March 16, 2017; **Accepted date:** April 04, 2017; **Published date:** April 11, 2017

**Copyright:** © 2017 Şenel G, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

### Abstract

**Objective:** People with a history of substance misuse may develop cancer and associated pain syndromes requiring opioid therapy. These patients are at increased risk of receiving inadequate pain management due to fear of exacerbating the addiction by using opioid medications and the lack of knowledge about treating patients with addiction. We present our pain treatment strategy in a pancreatic cancer patient with a history of substance abuse.

**Case report:** A 38 years male patient was admitted to emergency service with severe epigastric pain. He had a diagnosis of pancreatic cancer and underwent surgery 3 years ago. He had recurrence while receiving chemotherapy. He was using transdermal fentanyl 100 mcg/h and morphine subcutaneously given by his primary doctor. He was unable to obtain morphine because of prescription problems and experiencing severe pain and abstinence symptoms. On pain consultation, it was learned that he had a history of substance abuse and received treatment. A bilateral neurolytic splanchnic block was performed for pain relief and the patient was integrated to a supportive program with psychiatry clinic. After 3 months, pain control was adequate with transdermal fentanyl 50 mcg/h and adjuvant drugs.

**Conclusion:** Splanchnic plexus neurolysis is a technique that can potentially improve pain control and quality of life in pancreatic cancer. For the effective management of pain in patients with a co-occurring addictive disorder, invasive treatment techniques might be preferable early in the course of pain treatment instead of opioid dose escalation. Good communication between teams is essential.

**Keywords:** Cancer; Pain; Opioids; Neurolytic block; Substance abuse

### Introduction

People with a history of substance misuse may develop cancer and associated pain syndromes requiring opioid therapy. They are at higher risk of certain diseases, both malignant and non-malignant life limiting conditions and are therefore likely to access Palliative Care Services [1]. When a painful illness is complicated by a co-occurring addictive disorder, management may be more complex and challenging for the health care providers. These patients are also at increased risk of receiving inadequate pain management due to a fear of exacerbating the addiction by using opioid medications and the lack of knowledge about treating patients with addiction [2,3]. We present our pain treatment strategy in a pancreatic cancer patient with a history of substance abuse.

### Case Report

A 38 years male patient was admitted to emergency service with severe epigastric pain. He had a diagnosis of pancreatic cancer and underwent surgery 3 years ago. He had recurrence one year later while receiving chemotherapy. His pathology revealed neuroendocrine tumor and he had multiple metastatic lesions in the liver. He was using transdermal fentanyl 100 µg/h and morphine subcutaneously given by his primary doctor for the pain that has started one month before. He was unable to obtain morphine because of prescription problems for 4

days and experiencing severe pain and abstinence symptoms. On pain consultation, it was learned that he was working as a tourist guide and had a history of substance abuse. He had received addiction treatment and was now in recovery from any drugs or other substances. His pain was radiating from epigastrium towards the back showing neuropathic pattern. He was subsequently hospitalized in the Pain and Palliative Care Unit for further pain management program. A splanchnic neurolysis was planned and the next day a diagnostic splanchnic block with local anesthetic using retrocrural technique followed by a bilateral neurolytic splanchnic block with 10 ml of alcohol on both sides was performed. The patient was integrated to a supportive program with psychiatry clinic. His opioid dose was lowered with the establishment of a treatment plan including transdermal fentanyl, pregabalin 600 mg/day, quetiapine 25 mg/day, lorazepam 2 mg/day and essitalopram 20 mg/day. After 3 months, pain control was adequate with transdermal fentanyl 50 µg/h and adjuvant drugs.

### Discussion

The prevalence of substance abuse is increasing in the general population and we are encountering more patients with pain and history of substance abuse [4,5]. When pain requiring opioids are accompanied with a co-occurring addictive disorder, treatment becomes complicated and challenging both for the patient and the health care professionals. Patients with a substance misuse history are at increased risk of receiving inadequate pain management because many clinicians feel reluctant to prescribe opioids due to a fear of

exacerbating the addiction by using opioid medications [2]. These patients are usually undertreated as a result of lack of knowledge and misconceptions [2,3].

Cancer patients suffer from multiple symptoms affecting quality of life. Pain is often the most dreaded one among the others. It is important to realize that patients with addictive disorders may also experience significant cancer pain and therefore all complaints of pain must be taken seriously and carefully evaluated. The World Health Organization (WHO) analgesic ladder is the framework used to guide the worldwide pharmacologic treatment of pain in chronic pain and palliative care patients [6]. It advocates the stepwise safe use of opioids for moderate to severe pain due to cancer. Opioids used to manage cancer pain for patients with no prior history of substance abuse or addiction, is rarely associated with new onset of substance disorder [7,8]. Misuse and inadequate knowledge about the dosing and side effects attaches a stigma to opioid use and many physicians have a fear of using opioids in necessary amounts to relieve pain. The WHO analgesic ladder should be used, even if actively misusing opioids or on a methadone programme [6,8]. A comprehensive approach addressing the pharmacological, biological, social and psychiatric aspects of pain along with substance abuse is mandatory to effectively manage the pain. When choosing pain medications, avoiding the optimal use of opioids may result in inadequate pain relief, which may actually precipitate relapse of abuse by forcing recovering individuals to self-medicate their pain [9,10]. Oral route of slower onset or longer duration opioids are preferred [11].

Pain is common in pancreatic cancer patients with 70%-80% suffering substantial pain [12]. The pancreatic cancer pain is usually refractory to opioids leading to rapid dose escalation and opioid related side effects [13]. The quality of life is seriously affected and pain management in the context of palliative care should be an essential priority in the therapeutic plan.

Our patient was using transdermal fentanyl 100 µg/h and morphine subcutaneously for his severe pain. The relief of his pain was not satisfactory and he had a rapid opioid dose escalation in the last one month. It is known that patients with a drug dependency problem may have a greater than expected need regarding pain relief compared to those who are not dependent because they may already have a degree of drug tolerance [14]. Non-opioid analgesics as adjuvants and non-pharmacological interventions should also be considered when appropriate. In patients with a co-occurring addictive disorder, invasive treatment techniques might be preferable early in the course of pain treatment instead of opioid dose escalation [15].

Splanchnic plexus neurolysis is an effective technique that can potentially improve pain control and quality of life in pancreatic cancer [16]. The efficacy of thoracic splanchnic nerve or celiac ganglion neurolytic blocks have been established for the management of pain in upper gastrointestinal tumors in various studies. They provide superior pain relief with a changing incidence of side effects like orthostatic hypotension, diarrhea, back pain, retroperitoneal hemorrhage or neurological injury [17,18]. We performed splanchnic block using alcohol under fluoroscopic guidance in our patient and he was pain free the next day. We didn't experience any complication attributable to the procedure. The dose of transdermal fentanyl was tapered to 50 µg/h in one week. Psychiatry consultation proposed the use of quetiapine, benzodiazepine and antidepressant drugs together to

prevent abstinence or other psychiatric symptoms. Pain control was adequate after 3 months and the patient was still in recovery from substance abuse, receiving chemotherapy.

Continuous assessment and re-evaluation of the effects of pain interventions and good communication between teams are essential. A multidisciplinary approach including close liaison with drug dependency unit or psychiatry and other health care professionals may be beneficial to optimize the care of the patient.

## References

1. Savage SR (2003) Principles of pain management in the addicted patient. In: Graham AW, Schultz TK, May-Smith MF, Ries RR, WilfordBB (Eds). Principles of addiction medicine, 3rd ed. Chevy Chase, MD: American society of addiction medicine: 1405-1416.
2. Childers JW, Arnold RM (2012) "I feel uncomfortable 'calling a patient out'": Educational needs of palliative medicine fellows in managing opioid misuse. *J Pain Symptom Manag* 43: 253-260.
3. Portenoy RK, Dole V, Joseph H, Lowinson J, Rice C, et al. (1997) Pain management and chemical dependency. Evolving perspectives. *JAMA* 278: 592-593.
4. Kirsh KL, Passik SD (2006) Palliative care of the terminally ill drug addict. *Cancer Invest* 24: 425-431.
5. Passik SD, Theobald DE (2000) Managing addiction in advanced cancer patients: Why bother? *J Pain Symptom Manag* 19: 229-234.
6. World health organization (2017) WHO pain ladder.
7. Højsted J, Sjøgren P (2007) Addiction to opioids in chronic pain patients: A literature review. *Eur J Pain* 11: 490-518.
8. Passik SD, Kirsh KL, McDonald MV, Ahn S, Russak SM, et al. (2000) A pilot survey of aberrant drug-taking attitudes and behaviors in samples of cancer and AIDS patients. *J Pain Symptom Manag* 19: 274-286.
9. Connock M, Juarez-Garcia A, Jowett S, Frew E, Liu Z (2007) Methadone and Buprenorphine for the management of opioid dependence: A systematic review and economic evaluation. *Health Technol Assess* 11: 1-171.
10. Prater CD, Zylstra RG, Miller KE (2002) Successful pain management for the recovering addicted patient. *Prim Care Companion J Clin Psychiatry* 4: 125-131.
11. Ballantyne JC (2007) Opioid misuse in oncology pain patients. *Curr Pain Headache Rep* 11: 276-282.
12. Wyse JM, Chen YI, Sahai AV1 (2014) Celiac plexus neurolysis in the management of unresectable pancreatic cancer: When and how? *World J Gastroenterol* 20: 2186-2192.
13. Collins D, Penman I, Mishra G, Draganov P (2006) EUS-guided celiac block and neurolysis. *Endoscopy* 38: 935-939.
14. Fallon M, Cherny N, Hanks G (2010) Opioid analgesic therapy. In: Hanks G, editor. *Oxford Textbook of Palliative Medicine*. Oxford: Oxford University Press: 661.
15. Savage SR, Kirsh KL, Passik SD (2008) Challenges in using opioids to treat pain in persons with substance use disorders. *Addict Sci Clin Pract* 4: 4-25.
16. Ozyalcın NS, Talu GK, Camlıca H, Erdine S (2004) Efficacy of coeliac plexus and splanchnic nerve blockades in body and tail located pancreatic cancer pain. *Eur J Pain* 8: 539-545.
17. Papadopoulos D, Kostopanagioutou G, Batistaki C (2013) Bilateral thoracic splanchnic nerve radiofrequency thermocoagulation for the management of end-stage pancreatic abdominal cancer pain. *Pain Physician* 16: 125-133.
18. Sehgal S, Ghaleb A (2013) Neurolytic celiac plexus block for pancreatic cancer pain: A review of literature. *Indian J Pain* 27: 121-31.