Impact of Tobacco Smoking Abstinence on Opioid Use in Patients with Chronic Non-malignant Pain

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Introduction
Treatment of chronic nonmalignant pain is complex, requiring multi-modal therapy, commonly including opioids. Tobacco smoking is prevalent in the chronic pain population; it has a complex effect on pain perception and has been linked as a risk factor to several pain conditions (1-3). Smokers have been found to experience greater levels of pain (4) and require greater opioid doses than non-smokers (4-7). We present a study to examine the impact of smoking abstinence on opioid use in patients with chronic nonmalignant pain.

Methods
In this case series, 10 patients being treated with opioids for chronic nonmalignant pain at a university pain management center were followed at least 1 year after smoking cessation. Their opioid dosages were recorded and their pain scores were assessed via both the McGill Pain Questionnaire (MPQ) and the Pain Disability Index (PDI).

Results
The average age of the subjects was 57 years. The average morphine equivalent opioid dosage prior to tobacco abstinence was 107 mg/day over an average of 8.7 years of opioid use. Prior to abstinence, the subjects averaged 1.2 packs per day of cigarettes for 34.9 years. Of the 10 participants, none were on lower total daily morphine equivalent doses after 1 year of tobacco abstinence. Eight continued on the same opioid regimen while 2 were managed on increased doses after 1 year of tobacco abstinence. Those continued on the same regimen had significantly lower scores on the McGill Pain Questionnaire (MPQ) p=0.03 and Pain Disability Index (PDI) p=0.03, though all subjects showed improvements in MPQ and PDI, with average improvements of 5 and 14 points respectively. However, no significant changes were seen in the Average Daily Pain Score, Pain Catastrophic Scale (PCI), Beck Depression Index (BDI), The Screener and Opioid Assessment for patient with Pain- Revised (SOAPP-R) or the Current Opioid Misuse Measure (COMM).

Conclusion
The relationship between chronic pain, tobacco smoking and opioid use is complex. The goal of any treatment, including opioid management, for chronic non-malignant pain should include decreased pain and improve quality of life. Based on the improved scores on the MPQ and BDI, despite the continued or increased opioid daily dosages, tobacco abstinence is an effective intervention for those with chronic nonmalignant pain.

References: