Pain management in sinonasal surgery: are opioids required?


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With the United States in the throes of an opioid abuse epidemic, significant attention has been focused on physician prescriptions, and the potential diversion of medications as a conduit toward opioid addiction. In 2014, opioid addiction was estimated to affect 2.5 million adults in the United States. In terms of drug overdose deaths, 37% of the 44,000 overdose deaths reported in 2014 were attributed to opioids.[1] Certainly, prescription drugs are seen as a less threatening alternative for obtaining drugs than are purchases from a drug dealer. Indeed, in 1 study of schoolchildren in grades 7 to 12, 30% believed that prescription pain relievers are not addictive.[2] Additionally, the focus on inpatient and outpatient pain symptoms may have exacerbated opioid prescribing. In 2000, the Joint Commission unveiled its pain management standards, with the premise that "excuses for inadequate pain control appear to have run their course and will no longer be accepted because poor pain control is unethical, clinically unsound, and economically wasteful." This created a major clinical focus, uniformly utilizing an in-hospital visual analog scale and making pain the "5th vital sign to be monitored."[3]

Obviously, none of us wish to see our patients in pain postoperatively, and I do not believe that my patients have become addicted from their short term pain management, although evidence shows that this can occur. However, I have no idea how many of the pills that I have provided in the past have been diverted to other individuals or perhaps even taken by adolescents. Recognition of this is a strong impetus toward providing appropriate pain relief, but also toward minimizing the possibility of overprescribing. In this issue of the *International Forum of Allergy & Rhinology* (*IFAR*), several articles further evaluate the issue of postsurgical pain and its management. Riley et al.[4] evaluate pain in postoperative endoscopic sinus surgery (ESS) and septoplasty with a visual analogue scale (VAS) and medication usage over a 2-week period. Patients had an average of 27 of 30 opioid pills left over at the end of the study, and the authors identified that the pain decreased rapidly during the first 3 days. In another article, Khanwalkar et al.[5] evaluate the utilization of a mobile digital patient engagement platform to evaluate pain following functional ESS (FESS) alone, FESS combined with septoplasty, and FESS combined with drilling. The study demonstrated that more extensive procedures had a nonsignificant increase in pain; the only significant pain difference occurring at day 2 in patients who underwent a concomitant septoplasty. The underlying pathology did not appear to affect the level of pain. Although this report does not discuss medication usage, it does report that the patients were prescribed acetaminophen-hydrocodone 5/325 and also advised to take acetaminophen for less severe pain. The overall pain score was in the minimal range across all proceduresby day 2. Although I, personally, still provide patients with 15 acetaminophen-hydrocodone 5/325 tablets, I explain that these medications are primarily for use prior to my relatively aggressive postoperative debridements, and ask the patients not to drive themselves for the early postoperative visits. In another article, Maul et al.[6] investigate the potential for a handheld microcurrent device to provide rapid relief of sinonasal pain in a double-blind clinical trial. They demonstrated significantly improved pain reduction over the placebo device acutely at 10 minutes following application. Eighty percent of the patients reported that they preferred this treatment to their current therapy and therefore further studies of such devices would appear to be warranted.

Topical steroids remain the mainstay of therapy for chronic rhinosinusitis (CRS), especially chronic rhinosinusitis with eosinophilia. Douglas et al.[7] report on a phase 1 clinical study of a novel biodegradable mometasone furoate drug delivery system for treating CRS in the unoperated patient. This is the first steroid-eluting implant intended for use in patients who have not had prior surgery, and elutes the steroid over a 24-week period. Up to this point in time, the only options for the management of CRS in patients who not had surgery have been either oral steroids, topical nasal steroid sprays (the latter have been demonstrated not to penetrate the middle meatus well), high-dose high-volume steroid nasal irrigations or, in patients with nasal polyposis, the use of an exhalation delivery system (EDS). In addition to demonstrating a high level of safety in this study, 70% of patients reported at least a minimal clinically important difference (MCID) in their 22-item Sino-Nasal Outcome Test (SNOT-22) by the end of the study, and the average change became significant by week 1. Given the phase 1 feature of this implant trial, and the primary emphasis on safety, posttreatment imaging

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was not performed. However, clearly the device is worthy of further study and would appear to provide an alternative to the use of high-dose, high-volume steroid nasal irrigations and EDS in reducing the necessity of surgical intervention.

Oral OM-85 BV (Broncho-Vaxome®) has been utilized orally as an immunostimulant outside of the United States for the prevention and treatment of bronchitis and rhinosinusitis. Indeed, in the European Position Paper on Rhinosinusitis its use was identified as having level Ib evidence. This extract is derived from infectious respiratory bacteria and stimulates the Toll-like receptors. A report by Triantafillou et al.[8] in this issue of *IFAR* evaluates its potential topical utility and the effect on ciliary beat frequency. In this in vitro study the authors demonstrate increased beat frequency, nitric oxide generation, and apparent bitter taste receptor activation, suggesting the potential for an alternative mode of action and route of administration.

Haahr et al.[9] evaluate the efficacy of MP-AzeFlu (Dymista®) in the management of allergic rhinitis in a real-life Danish study, utilizing a VAS for symptoms. They demonstrate rapid improvement of nasal symptoms beginning by day 1 and continuing improvement to the last study day (day 14). The role of gastroesophageal reflux (GERD) in the pathogenesis of CRS continues to be debated, but a large population-based study in Korea by Kim et al.[10] provides additional evidence of the association. In this study the odds ratio of GERD in the CRS group was 2.04.

Given the limited numbers of the less common sinonasal tumors, database studies are often required to identify their characteristics and most appropriate management. Several interesting database studies in this issue evaluate the treatment of such uncommon tumors. Additionally, given the recent publicity surrounding the death of a patient from *Naegleria fowleri* following nasal irrigations, and a prior study demonstrating that despite our instructions many patients use tap water,[11] we have also included an editorial commentary on what we actually tell our patients.[12]

We look forward to seeing you at the combined International Society of Inflammation and Allergy of the Nose (ISIAN)/International Rhinologic Society (IRS)/American Rhinologic Society (ARS) meeting, "Rhinoworld 2019," in Chicago in June.

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