The Opioid Epidemic – What the Oral and Maxillofacial Surgeon Needs to Know

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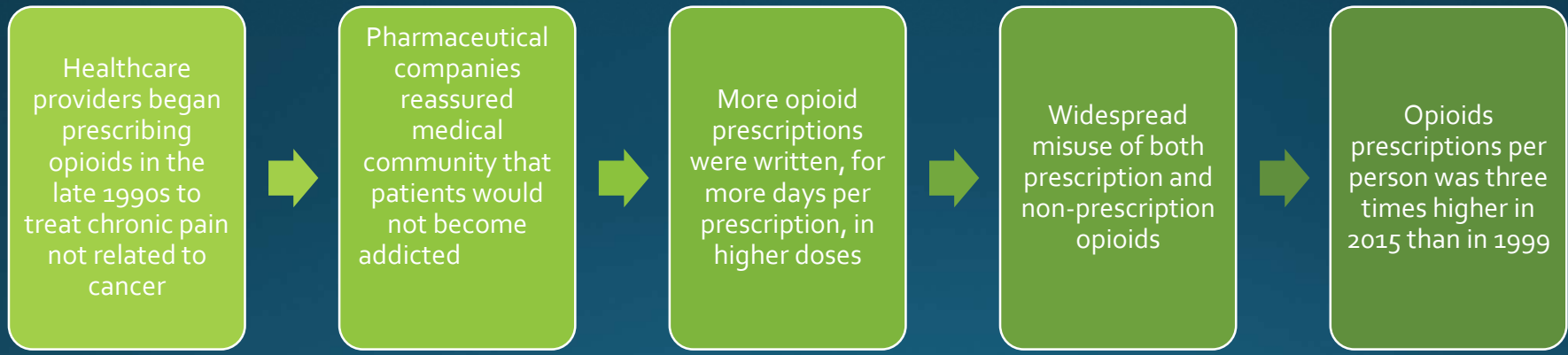
Disclosure

- I have no actual or potential conflict of interest in relation to this program/presentation.
- I disclose that I have no relevant financial relationships with commercial interests

Prescription Opioid Abuse Is a Critical Public Health Issue

Prescription Drug Abuse – How did this start?



The Opioid Epidemic – What is our role?

- In 1998, Dentists were the top specialty of prescribers of immediate-release opioids, accounting for 15.5% of all opioid prescriptions in the U.S.
- By 2012 this number had fallen to 6.4%
- Oral and Maxillofacial Surgeons primarily manage acute pain and pain medication prescribed following surgery may frequently be the first exposure many American adolescents have to opioid prescriptions.
- Opioid prescribing rates have increased between 2010-2015, with the largest increase being among 11-18 year-olds.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House Bill 21 - Control Substances Act

- Signed by the Governor on March 19, 2018 with an effective date of **July 1, 2018.**

- The law addresses opioid abuse by establishing prescribing limits, requiring continuing education on controlled substance prescribing, expanding required use of Florida's Prescription Drug Monitoring Program (EFORCSE) and more.

Required Course

- Each prescribing practitioner who is registered with the United States Drug Enforcement Agency, is required to take a Board-approved continuing education course.
- Florida Board of Dentistry
- Contains information on:
  - Current standards
  - Nonpharmacological therapy
  - Emergency opioid antagonists
  - Risk of opioid addiction following all stages of the treatment of acute pain
- The course must be completed by **January 31, 2019,** and at each subsequent licensure renewal.

Standards of Practice for Treatment of Acute Pain

Acute Pain

- Defined as "the normal, predicted, physiological, and time-limited response to an adverse chemical, thermal, or mechanical stimulus associated with surgery, trauma, or acute illness."
  - Legislature exempted from this definition pain related to:
    - Cancer
    - Terminal illness
    - Provision of relief for symptoms related an incurable, progressive illness or injury (chronic nonmalignant pain)
    - Palliative care
    - Serious traumatic injuries

Prescribing Limitations Schedule II Opioids

Treatment of **Acute Pain**:

- May not exceed **3-day** supply
- **7-day** supply may be prescribed if:
  - The prescriber, in his or her professional judgment, believes that more than a 3-day supply of such an opioid is medically necessary to treat the patient's pain as an acute medical condition
  - The prescriber indicates "ACUTE PAIN EXCEPTION" on the prescription; AND
  - The prescriber adequately documents in the patients medical records the acute medical condition and lack of alternative treatment options that justify deviation from the 3-day supply limit

Prescribing Limitations Schedule II Opioids

Treatment of **Non-Acute Pain**:

- Prescriber must indicate "NONACUTE PAIN" on a prescription for an opioid drug listed as a Schedule II controlled substance

Prescribing Emergency Opioid Antagonist

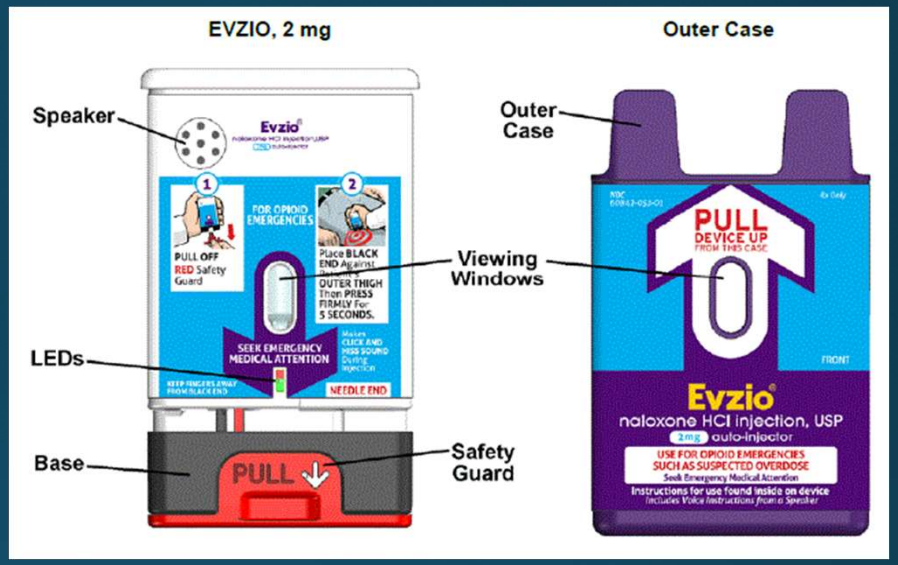
- For the treatment of pain related to a traumatic injury with an Injury Severity Score of 9 or greater, a prescriber who prescribes a Schedule II controlled substance listed in s. 893.03 or 21 U.S.C. s. 812 must concurrently prescribe an emergency opioid antagonist, as defined in s. 381.887(1)

Region	Injury Description	AIS	Square Top Three
Head & Neck	Cerebral Contusion	3	9
Face	No Injury	0	
Chest	Flail Chest	4	16
Abdomen	Minor Contusion of Liver Complex Rupture Spleen	2 5	25
Extremity	Fractured femur	3	
External	No Injury	0	
		Injury Severity Score:	**50**

Opioid Antagonists - Naloxone

IM/SC Auto-Injector (Evzio) – 0.4 mg - 2mg

- Instructions: 0.4-2 mg IM/SC Q 2-3 minutes into anterolateral thigh; not to exceed 10 mg (0.01 mg/kg)
- Onset: 2-5 minutes
- Duration: 30-120 minutes



Intranasal (Narcan) – 4 mg single dose

- Instructions: One spray in alternating nostrils Q 2-3 minutes
- Onset: 8-13 minutes
- Duration: 30-120 minutes

Prescribing Limitations Schedule III Opioids

- For a controlled substance listed in Schedule III, the amount dispensed pursuant to F.S. 465.0276 may not exceed a **14 day** supply

Prescription Drug Monitoring Program (PDMP)

- Each prescriber and dispenser or his/her designee must consult the PDMP system each time a controlled substance is prescribed or dispensed to a patient age 16 or older unless a statutory exemption applies.
  - Patient is less than 16 years of age
  - Drug being prescribed is a nonopioid Schedule V
  - System is not operational, as determined by DOH
  - Requestor has technological or electrical failure
    - Under this condition the prescriber must document the reason why the database was not consulted and they cannot give more than a 3 day supply.
- You may register for the PDMP at: https://www.floridapmpaware.net

PDMP Database Access

- You will need to establish an E-FORSCE account to log into the system.
- The following link will take you to the Department of Health's website on accessing the State of Florida PDMP database (E-FORSCE) :

  http://www.floridahealth.gov/statistics-and-data/e-forcse/

PDMP Compliance

- Failure of a prescriber to follow such guidelines constitutes grounds for disciplinary action pursuant to s.456.072(1)(gg), punishable as provided in s. 456.072(2)

He's one of the busiest men in town. While his door may say *Office Hours 2 to 4*, he's actually on call 24 hours a day.

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According to a recent Nationwide survey:

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DOCTORS in every branch of medicine—113,597 in all—were queried in this nationwide study of cigarette preference. Three leading research organizations made the survey. The gist of the query was—What cigarette do you smoke, Doctor?

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The rich, full flavor and cool mildness of Camel's superb blend of costlier tobaccos seem to have the same appeal to the smoking tastes of doctors as to millions of other smokers. If you are a Camel smoker, this preference among doctors will hardly surprise you. If you're not—well, try Camels now.

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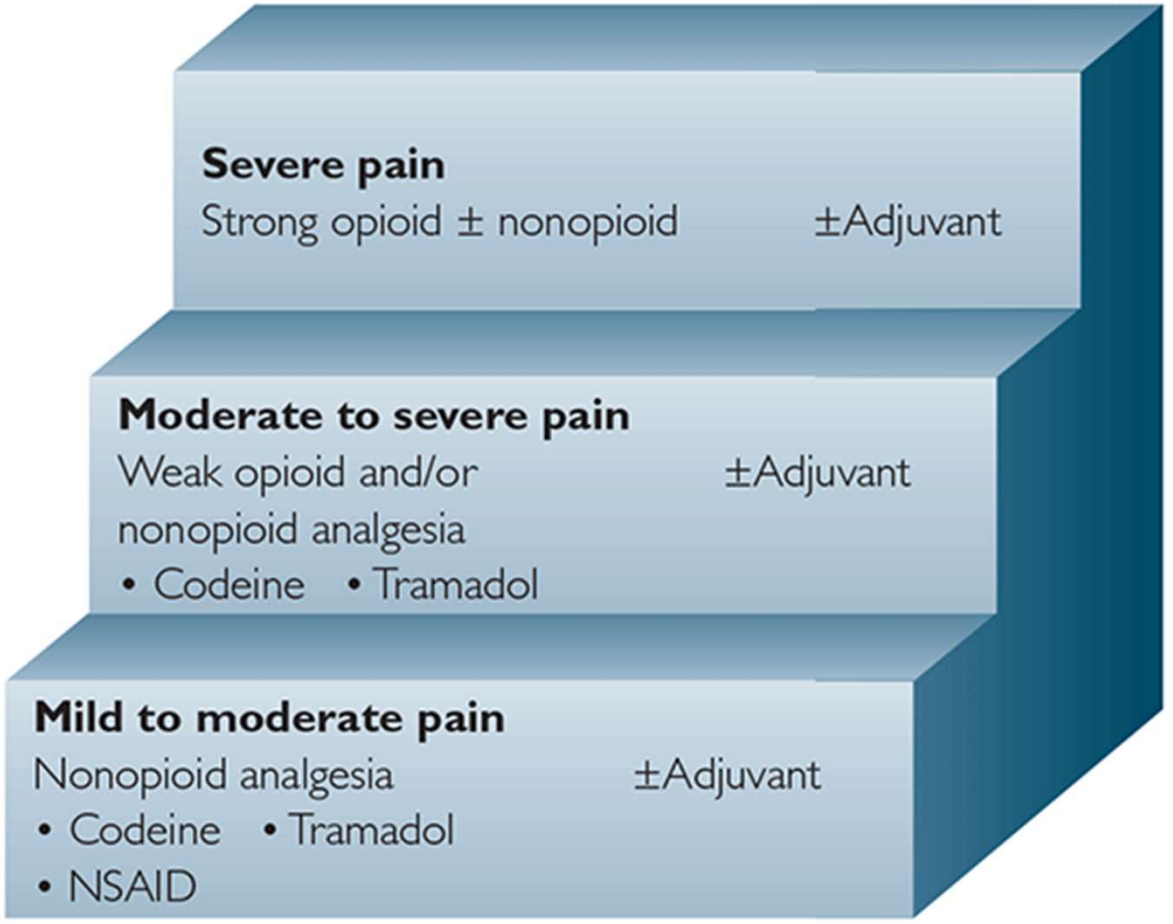
Things To Take into Consideration

- The choice of analgesic depends on the character, cause and severity of pain
- Start with the lowest effective dose to achieve adequate analgesia
- Prescribe only the number of days that the pain is expected to be severe enough to require opioids.
- Adverse effects should be treated prophylactically where possible
  - Opioid administration should be combined with laxatives to reduce the occurrence of opioid induced constipation
    - Docusate Sodium 50, 100, 240 mg BID
    - Bisacodyl 5, 10 mg QD
- Reassess benefits and risks if considering dose increases

WHO Prescribing Protocol



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Multimodal Analgesia

- Combination of APAP and an NSAID effectively lowers pain intensity and decreases the need for supplemental post-operative analgesics better than either drug alone, with minimal adverse effects.
  - Dosing strategies:
    - 800 mg Ibuprofen Q 8 H + 1000 mg APAP Q 6 H
    - 600 mg Ibuprofen Q 6 H + 1000 mg APAP Q 6 H
    - Start medication before anesthesia wares off
- Dose and timing need to be tailored to patient needs and the practitioners expectation of postoperative pain
  - Titrate dose and type of medication to effect
- Need to make sure the maximum dose of either medication is not exceeded

Pre-Emptive Effect of Dexamethasone and Diclofenac Sodium Associated With Codeine on Pain, Swelling, and Trismus After Third Molar Surgery: A Split-Mouth, Randomized, Triple-Blind, Controlled Clinical Trial

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Purpose: We aimed to compare the effect of dexamethasone, 8 mg, and diclofenac sodium, 50 mg, associated with codeine, 50 mg, on the control of pain, swelling, and trismus after extraction of impacted third molars.

Materials and Methods: Fifteen healthy patients with a mean age of 22.8 years (SD, 12.62 years) received a single oral dose of either drug 1 hour before each surgical procedure (left and right teeth). At 24, 48, and 72 hours after surgery, swelling was determined by use of linear measurements on the face and trismus was determined by maximal mouth opening. Postoperative pain was self-recorded by the patients using a numerical rating scale at 24-hour intervals for a period of 72 hours. Data analysis involved descriptive statistics and Shapiro-Wilk, Wilcoxon, and paired *t* tests ($P < .05$).

Results: Dexamethasone controlled pain ($P = .016$) and edema ($P = .08$) within 48 hours better than diclofenac sodium associated with codeine. No statistically significant differences were found between drugs regarding trismus and consumption of rescue analgesics (acetaminophen).

Conclusions: The results of this study suggest that pre-emptive administration of dexamethasone, 8 mg, showed better control of pain and swelling in bilateral extractions of third impacted mandibular molars.

J Oral Maxillofac Surg 76:60-66, 2018

Effects of a Single-Dose of Pre-Emptive Pregabalin on Postoperative Pain and Opioid Consumption After Double-Jaw Surgery: A Randomized Controlled Trial

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Purpose: The effect of a single-dose of pre-emptive pregabalin is still unknown, although it is used as an adjuvant in controlling acute postoperative pain. The purpose of this study was to evaluate the effects of pre-emptive single-dose pregabalin on postoperative acute pain and 24-hour opioid consumption in patients who underwent double-jaw surgery.

Patients and Methods: Forty patients (18 to 45 yr old; American Society of Anesthesiologists status I to II) for whom elective double-jaw surgery was planned under general anesthesia were included in this study, which had been planned as a prospective, randomized, and double-blinded study. Patients were randomly divided into 2 groups: the pregabalin group (n = 20) was given pregabalin 150 mg orally 1 hour before general anesthesia and the placebo group (n = 20) was given an oral placebo capsule. The groups were administered the routine general anesthesia protocol. Postoperative analgesia was performed intravenously in the 2 groups twice a day with dexketoprofen trometamol 50 mg and patient-controlled analgesia with fentanyl. Postoperative analgesia was evaluated using the visual analog scale (VAS). Fentanyl consumption, additional analgesia requirement, and side-effects were recorded during the first 24 hours after surgery. Descriptive and bivariate statistics were computed, and significance was set at a *P* value less than .05.

Results: Compared with placebo, the VAS score was statistically lower in the pregabalin group during the early postoperative period ($P < .05$). The 24-hour opioid consumption was significantly higher in the placebo group compared with the pregabalin group (509.40 ± 261.56 vs 260.10 ± 246.53 μq, respectively; $P = .004$). In addition, the analgesia requirement was statistically lower in the pregabalin group ($P < .05$). Nausea or vomiting was observed more often in the placebo group, whereas other side-effects were similar for the 2 groups.

Conclusion: A single 150-mg dose of pre-emptive pregabalin decreased postoperative opioid consumption in the first 24 hours after double-jaw surgery. Multimodal analgesia techniques that contain pre-emptive analgesia can be used successfully in preventing postoperative pain caused by orthognathic surgery.

J Oral Maxillofac Surg 74:53.e1-53.e7, 2016

Assessment of Combined Local Anesthesia and Ketamine for Pain, Swelling, and Trismus After Surgical Extraction of Third Molars

Tülin Satılmış, MD, Hasan Garip, DDS, PhD,† Esra Arpacı, DDS,‡ Cem Şener, DDS, PhD,§ and Kamil Göker, DDS, PhD,¶*

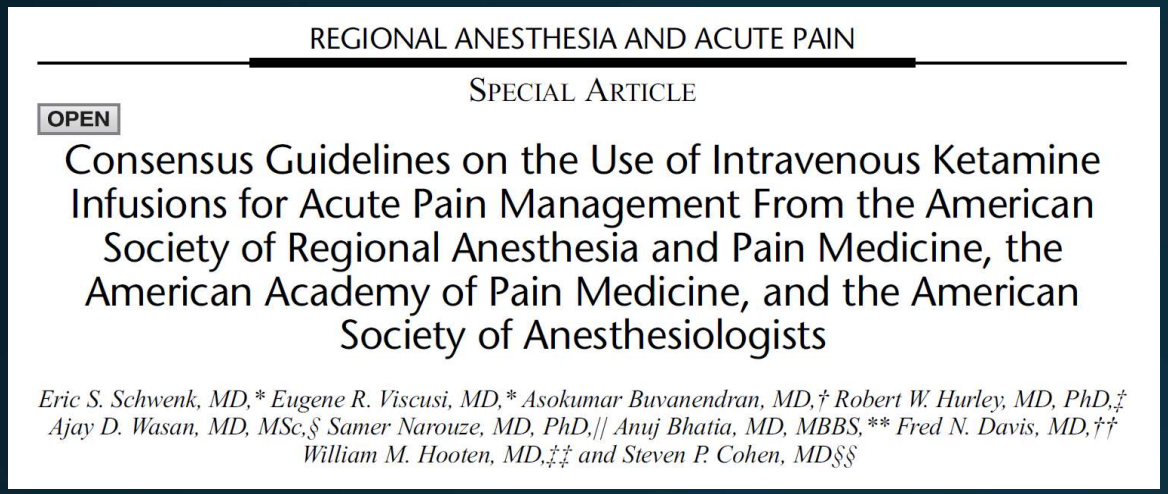
Purpose: The aim of this study was to assess the clinical efficacy of combined treatment with local anesthetic and subanesthetic ketamine for the relief or prevention of postoperative pain, swelling, and trismus after the surgical extraction of third molars.

Patients and Methods: Fifty patients undergoing the extraction of impacted mandibular third molars were included in the study. The patients were randomly divided into 2 groups: local anesthetic alone (LAA) and local anesthetic plus ketamine (LAK). The patients in the LAA group received 5 mL of a local anesthetic and saline combination comprising 2 mL of local anesthetic and 3 mL of saline. The patients in the LAK group received 5 mL of a local anesthetic, ketamine, and saline combination comprising 2 mL of local anesthetic and 0.3 mg/kg ketamine and saline.

Results: Facial swelling on postoperative days was significantly lower in the LAK group than in the LAA group ($P = .0001$). The mouth opening on the postoperative days was significantly greater in the LAK group than in the LAA group ($P = .0001$). The pain scores on the VAS at 30 minutes and 1, 4, 12, and 24 hours after surgery were significantly higher in the LAA group than in the LAK group ($P = .0001$, $P = .005$).

Conclusion: The combination of a local anesthetic and subanesthetic doses of ketamine during surgical extraction of third molars can produce good local anesthesia while affording a comfortable procedure for the surgeon and patient and providing good postoperative analgesia with less swelling and significantly less trismus.

J Oral Maxillofac Surg 67:1206-1210, 2009



REGIONAL ANESTHESIA AND ACUTE PAIN

SPECIAL ARTICLE

OPEN

Consensus Guidelines on the Use of Intravenous Ketamine Infusions for Acute Pain Management From the American Society of Regional Anesthesia and Pain Medicine, the American Academy of Pain Medicine, and the American Society of Anesthesiologists

Eric S. Schwenk, MD, Eugene R. Viscusi, MD,* Asokumar Buvanendran, MD,† Robert W. Hurley, MD, PhD,‡ Ajay D. Wasan, MD, MSc,§ Samer Narouze, MD, PhD,|| Anuj Bhatia, MD, MBBS,** Fred N. Davis, MD,†† William M. Hooten, MD,‡‡ and Steven P. Cohen, MD§§*

Guidelines recommend:

- Bolus doses up to 0.35 mg/kg
- Infusion dose up to 1 mg/kg per hour in settings without intensive monitoring

Liposome Bupivacaine

- Indicated for administration into the surgical site to produce postsurgical analgesia.
- Only for local infiltration
- Do not administer is same site as local anesthetic

What would you prescribe?

Thank you for your attention!

Work Cited

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TABLE 6. Summary of ASRA/AAPM Recommendations for Subanesthetic Ketamine in Acute Pain

Recommendation Category	Recommendation	Level of Evidence*
Indications for use	(1) Perioperative use in surgery with moderate to severe postoperative pain (2) Perioperative use in patients with opioid tolerance (3) As analgesic adjunct in opioid-tolerant patients with sickle cell crisis (4) As analgesic adjunct in patients with OSA	(1) Grade B, moderate certainty (2) Grade B, low certainty (3) Grade C, low certainty (4) Grade C, low certainty
Dosing range	Bolus: up to 0.35 mg/kg Infusion: up to 1 mg/kg per hour	Grade C, moderate certainty
Relative contraindications	(1) Poorly controlled cardiovascular disease (2) Pregnancy, psychosis (3) Severe hepatic disease, ie, cirrhosis (avoid), moderate hepatic disease (caution) (4) Elevated intracranial pressure, elevated intraocular pressure	(1) Grade C, moderate certainty (2) Grade B, moderate (3) Grade C, low certainty (4) Grade C, low certainty
Personnel	Supervising clinician: a physician experienced with ketamine (anesthesiologist, critical care physician, pain physician, emergency medicine physician) who is ACLS certified and trained in administering moderate sedation Administering clinician: registered nurse or physician assistant who has completed formal training in safe administration of moderate sedation and is ACLS certified	Grade A, low certainty (see Consensus Guidelines on the Use of Intravenous Ketamine Infusions for Chronic Pain from ASRA, AAPM, and ASA)[35]

*Evidence was evaluated according to the USPSTF grading of evidence, which defined levels of evidence based on magnitude and certainty of benefit.[5]

Adjunctive Therapies for Post-operative Pain

- Long acting local anesthetic – Bupivacaine vs. Liposomal bupivicaine
- Corticosteroids – Dexamethasone
- Pre-emptive analgesic
- Gabapentanoids (Gabapentin and Pregabalin)
- Tramadol
- Ketamine

Pre-Emptive Analgesia with Ketamine for Relief of Postoperative Pain After Surgical Removal of Impacted Mandibular Third Molars

Amith Hadhimane[1] · Manjunath Shankariah[2] · Kiran V. Neswi[2]

Received: 2 November 2014 / Accepted: 29 May 2015 / Published online: 5 July 2015

"The sub-mucosal injection of 0.5 mg/kg ketamine administered before surgical removal of impacted mandibular third molars was found to be effective in significantly reducing post-operative pain for the first 24 h."