PERIPARTUM PAIN MANAGEMENT IN PATIENTS WITH OPIOID DEPENDENCE

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February 24, 2022
Project ECHO

I have no disclosures.

Key takeaways…

- Patient education and engagement in the prenatal period contribute to better labor and postpartum pain management and patient satisfaction.
- Multimodal analgesia decreases the need for opioids, but these medications will still be needed in most opioid-dependent patients post-operatively.
- Post-operative patients with opioid dependence should continue their MOUD, plus receive additional medications for acute pain management.
- Patients need to know that we care about their pain and want to achieve the most effective and safest analgesia.

Background…

- Pregnant patients with opioid dependence are encouraged to use opioid replacement
  - Improved pregnancy outcomes
  - Decreased risk of setbacks/relapse
  - Options are buprenorphine and methadone
- They will usually require higher doses of short-acting opioids for acute pain after cesarean delivery or other surgical procedures such as D&C or tubal ligation
- They may need less analgesia after vaginal delivery due to analgesic properties of buprenorphine

Why is appropriate peripartum pain management important?

- Helps patients ambulate sooner
- Decreases risk of post-operative complications
  - Deep venous thrombosis
  - Atelectasis/pneumonia
- Mental health conditions, including anxiety, can make pain management more challenging, and pain can make mental health issues worse

What are the challenges?

- Opioid-induced hyperalgesia—enhanced response to painful stimuli
  - Distinct from opioid tolerance
  - Patients on methadone and buprenorphine show much lower tolerance to cold pressor test (immersion of hand in ice water w/ measurement of HR and BP)
  - Molecularly complex phenomenon, w/ some evidence pro-inflammatory mediators play role via association of opioid receptor binding w/ cytokine release
- Patient and provider beliefs about addiction
- Legitimate concerns about risk of overdose

What is the best approach for labor analgesia?

- Many opioid dependent patients desire epidural pain management in labor
  - Typically the most effective pain control due to local anesthetic action
  - No contraindication to usual low-dose fentanyl (2-5 mcg/mL) in epidural infusion for those on buprenorphine or methadone
- Fentanyl/morphine iv at typical labor doses not likely to be of much benefit, but not contraindicated
- Avoid mixed agonist-antagonists such as nalbuphine (Nubain), due to risk of precipitated withdrawal
- Little experience w/ nitrous oxide in this population, but not contraindicated

What if a patient presents in labor and in opioid withdrawal concurrently?

- If methadone desired, can start at 20-30mg/d
  - Fentanyl/morphine can still be used for labor pain
  - Watch for over-sedation
- If buprenorphine desired, consult w/ physician familiar w/ buprenorphine induction
  - Administer COWS, give buprenorphine when moderate withdrawal
  - Do not use fentanyl or other opioids until final dose of buprenorphine is reached which resolves cravings and withdrawal (usually 12-24h, though shorter if re-initiation when prior effective dose is already known)
- Epidural is good choice in this scenario

What are general principles of postpartum pain control?

- Intravenous paracetamol/acetaminophen (1000 mg) and/or ketorolac (30 mg) should be given in the OR or PACU for post-op patients (cesarean or tubal ligation)
- Important to order around-the-clock scheduled ibuprofen and acetaminophen for immediate post-op patients
- Patients who are s/p vaginal birth can receive prn ibuprofen and acetaminophen
- Patients w/ hepatitis C should receive max 2000mg of acetaminophen

What are general principles of postpartum pain control?

- Continue opioid replacement therapy in labor and the postpartum period
- Dividing methadone bid or tid and buprenorphine qid may enhance contribution to pain control
- Consider increasing buprenorphine to as much as 32mg divided qid (i.e., 8mg q 6 hours) for the first 24-48h (then return to the pre-delivery dose)

What are general principles of postpartum pain control?

- Opioid pain management not generally required after uncomplicated spontaneous or operative vaginal delivery
- For those w/ 3rd or 4th degree perineal lacerations
  - Opioids can increase constipation
    - Usually not needed for acute pain management
    - Optimize bowel regimen re. MOUD effects
  - If regional anesthesia used (for labor or laceration repair), consider intrathecal morphine

How can we optimize postop pain control?

- Effectiveness for postop pain of neuraxial morphine (Duramorph) at time of cesarean is unclear in opioid dependent patients
- Some anesthesiologists avoid Duramorph due to frequent requirement for additional parenteral opioids and concerns about respiratory depression and over-sedation
- When Duramorph used, anesthesiology team typically manages all opioids for the first 24h post-op (except methadone and buprenorphine)

How can we optimize postop pain control?

- Can continue epidural infusion of low concentration local anesthetic in post-op period
- Patient often need to be on a monitored unit due to nursing requirements
- Epidural infusion would usually be d/c'd by 24h postop to facilitate ambulation, etc.

What other techniques exist for postop pain management?

- Transversus abdominis plane block (TAP block) shown to improve postoperative analgesia after cesarean delivery
  - Not a lot of data in postpartum patients on medication for opioid use disorder
  - Can be good adjunct in those who did not receive neuraxial morphine (emergency cesarean under general anesthesia)

What other techniques exist for postop pain management?

- If general anesthesia used, some may do best initially with hydromorphone PCAs
  - Hydromorphone PCA for opioid dependent patients can be started at 0.2mg q 10 minutes on demand with a one-hour lockout of 1mg
  - Avoid using basal rate to decrease risk of over-sedation and respiratory depression
  - Continuous pulse oximetry considered due to potential need for larger doses to achieve adequate pain control.
  - Transitioning to oxycodone sooner usually results in better pain control

What do national organizations say about pain management after cesarean?

- Society for Obstetric Anesthesia and Perinatology (SOAP) issued “Enhanced Recovery After Cesarean (ERAC) Consensus Statement” in May 2019
  - Evidenced-based care pathway to standardize perioperative care
  - Several elements—here are a few of the pain management items:
    - Initiate multimodal analgesia: Intrathecal or epidural morphine, non-opioid analgesia started in the operating room unless contraindicated (acetaminophen and ketorolac), and local anesthetic wound infiltration or TAP block for some
    - Promote breastfeeding and bonding: skin-to-skin as soon as possible in OR
    - Early oral intake (ice chips/water within 60min in PACU, advance to regular diet within 4h postop, as tolerated)
    - Early ambulation
    - Promote periods of rest (cluster care and meds)

Enhanced Recovery after Cesarean Section (ERAC)

Enhance Recovery After Cesarean (ERAC)

Patient Handout 2

Steps for Faster Recovery After Cesarean Delivery

SOAP
Society for Obstetric Anesthesia and Perinatology

	Before Delivery	Just before and during your cesarean delivery	First 24 hours after your surgery	24 hours before your hospital discharge
Pain control	Take medicines as instructed by your anesthesia and obstetric providers	You will receive spinal or epidural anesthesia for your Cesarean delivery	Take pain medicines as directed If needed, ask for medicines for itching, nausea and shivering	Take pain medicines as directed Continue skin-to-skin contact with your baby
Skin care	Don't shave pubic hair the day before or day of your Cesarean Shower or bathe and wait until you are completely dry before using the disinfectant wipes night before surgery		Do not touch your incision site	Bandage over incision is removed You may shower or bathe Follow wound care instructions

Eating and drinking	**You may eat until 6-8 hours before your Cesarean delivery You may drink clear liquid (water) or a carbohydrate-containing drink up to 2 hours before surgery**		**You may start chewing gum while in recovery You may eat and drink as soon as you feel you are ready**	**Eat healthy foods, that are easy to digest Drink 8-10 large glasses of water each day**
Activity	Normal		With the assistance of your nurse: Sit up in bed within 4 hours after surgery Walk within 8 hours after surgery Walk at least 4 times every day	Walk at least 4 times every day Don't lift anything heavier than your baby
Breastfeeding	Discuss breastfeeding with your care team If you plan to pump at home plan for it	Communicate your breastfeeding preference with your care team Ask for lactation support and inform yourself how to hand express to help stimulate your milk supply	Start breastfeeding as soon as possible after birth Breastfeed at least every 3 hours or more often if baby is hungry Your nurse and lactation services can address any question you have Try attend a breastfeeding class	Breastfeed at least every 3 hours or more often if baby is hungry
Other Steps	Don't smoke as smoking may delay your recovery from surgery Talk to your doctor about programs to stop smoking			Review discharge instructions Schedule follow-up appointments with your obstetric provider and pediatrician

How can we optimally manage oral opioids for acute pain?

- Once oral intake is tolerated, an oral opioid such as oxycodone is most effective
  - Duration of action is 4-6h, rather than shorter duration of iv fentanyl, morphine, and hydromorphone
  - Goal is to give sustained periods of good pain control, rather than “chasing” the pain w/ short acting agents
- Give oxycodone in the recovery room for stable patients who did not receive neuraxial morphine (or if neuraxial morphine given, discuss with anesthesiologist)

How can we optimally manage oral opioids for acute pain?

- Typical doses of oxycodone for non-opioid dependent postop patients are 5-10mg q 4-6h
- Opioid dependent patients will often need higher doses in range of 15-20mg q 4-6h
- Order 10mg q4h prn moderate to severe pain, with 5mg dose available prn breakthrough pain
- Once prn dose is commonly needed, baseline dose can be increased to 15mg q 4-6h, with 5mg dose available again for breakthrough pain.

Caveats…

- For breastfeeding patients, goal is no more than 30mg/day of oxycodone once the mature milk is in at ~ 72h postpartum.
- Patients on methadone may note excessive sedation from their third trimester dose by the time they are a few days postpartum—be prepared to decrease the dose when needed. A 10mg decrease is often sufficient.

How is pain managed upon d/c from the hospital?

- Give rx's for tid ibuprofen and qid acetaminophen (modify dosing for patients with hepatitis C)
- Give postop patients rx for sufficient oxycodone to last until f/u appt
- Some preference for single agents (oxycodone alone) vs combination (oxycodone-acetaminophen) so that it is easier for patients to make sure they are using individual agents optimally, but not excessively
- Evidence not clear that single agents are more likely to be "abused" or taken excessively than combination agents
- See post-op patients back at 7-10 days to continue assessment of pain and other post-op recovery parameters

How is pain managed upon d/c from the hospital?

- Expect postop patients to continue using approximately same amount of oxycodone in first 2-4 days at home as during last day of hospitalization, with attention to recommended limits in breastfeeding.
- Use should decrease over following days
- No further oxycodone typically needed after 7-10 days postpartum, barring surgical complications such as wound infections
- Important to discuss with patients anticipated management of opioid pain medications

Other tips…

- Give rx for enough buprenorphine to last until f/u appt, based on quantity of rx given at last appt
- Some insurance plans and pharmacies require a physician's formal approval to dispense and pay for oxycodone for acute pain when buprenorphine is being rx'd—be prepared so that inadequate treatment of pain can be avoided.
- Discuss safe disposal of unneeded oral opioids

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Thank you!