EUHM SAME DAY JOINT PROTOCOL

EUHM and Kaiser Orthopedic Surgeons: Shervin Oskouei, M.D., Nickolas Reimer, M.D., Theodis Buggs, Jr, M.D., Vincent Boswell, M.D., Jonathan Morris, M.D.

Author: Shannon Wheat, M.D., Department of Anesthesiology, EUHM PACU Medical Director

Last Updated: January 20, 2021

Summary

- Goals: To employ anesthetic techniques that control pain and facilitate working with PT within an hour of PACU arrival for our outpatient THAs and TKAs

- Same day joint patients will usually have "SDJ" or "same day" in the comments section on our SurgiNet perioperative tracking board. If the case is a primary joint replacement and nothing has been notated in the comments section, please discuss discharge plan with surgeon in POHA.

- Peri-operatively, continue to encourage patient regarding same day discharge and educate patient on post-op pain expectations

- Pre-op meds: Acetaminophen, Celebrex, Gabapentin/Lyrica, Scopolamine patch/Emend

- Intra-op: Spinal without additives or CSE unless contraindicated (Exception: Dr. Buggs's anterior hip surgery - GA with muscle relaxant)
    - Oskouei/Reimer: lidocaine PF 50-100mg or hyperbaric bupivacaine 7.5-9mg
    - Kaiser: hyperbaric bupivacaine 7.5-9mg +/- CSE
    - Other meds: TXA, decadron, ketorolac, zofran

- PACU:
    - 500ml-1000ml crystalloid bolus or 250ml albumin (if cardiac or renal issues) on arrival to PACU to continue to replace NPO and surgical deficits to reduce nausea, hypotension, and PACU/PT delays
    - Avoid narcotics. If narcotics needed, consider lower dose
    - Sign out: **AFTER** patient completes PT in case patient fails PT and needs intervention such as pain medication and/or fluid bolus for nausea or hypotension

Oskouei's Same Day Joint Preferences

Pre-op

- Acetaminophen 975mg po
- Gabapentin
- Celebrex
- Scopolamine patch if under 70 yo or Emend

Intra-op

- Spinal unless contraindicated. If unsure of surgical length, consider CSE and dosing epidural with lidocaine 2% PF if needed.
    - Spinal Lidocaine 2% PF 50-100mg **(*Oskouei's preference*)**
        - This protocol is used at Emory University Ortho Spine Hospital (EUOSH) only if pt is able to receive toradol **AND** decadron 8mg IV intra-op (if have CKD or diabetic on meds, typically not given a lidocaine spinal -> low dose hyperbaric marcaine spinal)
            - Dosing "graded" to height: 50mg for pts 5ft or less, 100mg for those 6ft+. Average dose about 70-80mg
            - Decadron serves as PONV prophylaxis and to prolong post-op analgesia and sensory block of neuraxial and peripherally used local anesthetics
        - The literature reports higher risk of TNS with lidocaine spinals than other local anesthetics. Overall risk = 13% (Bupivacaine risk = 2%). All locals have risk of TNS. Intrathecal chloroprocaine and mepivacaine have same TNS risk as lidocaine.
        - Use at your own discretion
    - Spinal Marcaine 0.75% (NO ADDITIVES – even fentanyl can prolong duration)
        - Consider what you would give for a c-section (T4 level) and **reduce amount**
            - Total knee dosage: 1-1.4ml (typically 1.0-1.2ml, depending on patient height and age)
            - Total hip dosage: 0.8 -1.4ml (typically 1.0 ml)
        - Consider laying patient on surgical side for 5-7min after spinal placement
- If spinal contraindicated or unable to access space, consider GA with LMA for TKA
- Sedation
    - Propofol infusion, or
    - Precedex infusion w/small ketamine boluses if h/o chronic pain or opioid tolerant
- Other meds
    - Toradol 15mg (over 70yo) or 30mg (under 70yo) IV at closing if not already given
    - Zofran IV at end of procedure
    - Oskouei injects periarticular local anesthetic at the end of case
- Fluid
    - **Optimize fluid status by replacing NPO and surgical deficits.**

Oskouei's Same Day Joint Preferences (cont'd)

PACU

- **Consider 500ml-1L crystalloid fluid bolus (or 250ml albumin if cardiac or renal issues) on arrival to PACU if case too short to replace fluid deficit, if no cardiac or renal contraindications.** Patients that are under fluid resuscitated tend to experience orthostatic hypotension, nausea, and/or headache, which prolong PACU stay and prevent work with PT.
- Block – adductor canal catheter for TKA (often done by our Acute Pain Service)
- Consider robaxin (methocarbamol) 1000mg IV given over 15 min x1 prn for pain
- Consider IV Tylenol depending on timing of pre-op dose
- Fentanyl IV (small dose) or Dilaudid IV 0.25-0.5mg prn - try to limit narcotics as much as possible so patient may be alert for PT

Reimer's Same Day Joint Preferences

Pre-op

- Acetaminophen 975mg po
- Gabapentin
- Celebrex
- Scopolamine patch if under 70 yo or Emend
- **Reimer TKA SDJ patients do NOT get an adductor canal block. Reimer injects periarticular local only**

Intra-op

- Spinal unless contraindicated. If unsure of surgical length, consider CSE and dosing epidural with lidocaine 2% PF if needed.
    - Spinal Lidocaine 2% PF 50-100mg **(*Oskouei's preference*)**
        - This protocol is used at Emory University Ortho Spine Hospital (EUOSH) only if pt is able to receive toradol **AND** decadron 8mg IV intra-op (if have CKD or diabetic on meds, typically not given a lidocaine spinal -> low dose hyperbaric marcaine spinal)
            - Dosing "graded" to height: 50mg for pts 5ft or less, 100mg for those 6ft+. Average dose about 70-80mg
            - Decadron serves as PONV prophylaxis and to prolong post-op analgesia and sensory block of neuraxial and peripherally used local anesthetics
        - The literature reports higher risk of TNS with lidocaine spinals than other local anesthetics. Overall risk = 13% (Bupivacaine risk = 2%). All locals have risk of TNS. Intrathecal chloroprocaine and mepivacaine have same TNS risk as lidocaine
        - Use at your own discretion
    - Spinal Marcaine 0.75% (NO ADDITIVES – even fentanyl can prolong duration)
        - Consider what you would give for a c-section (T4 level) and **reduce amount**
            - Total knee dosage: 1-1.4ml (typically 1.0-1.2ml, depending on patient height and age)
            - Total hip dosage: 0.8 -1.4ml (typically 1.0 ml)
        - Consider laying patient on surgical side for 5-7min after spinal placement
- If spinal contraindicated or unable to access space, consider GA with LMA for TKA

Reimer's Same Day Joint Preferences (cont'd)

- Sedation
    - Propofol infusion, or
    - Precedex infusion w/small ketamine boluses if h/o chronic pain or opioid tolerant
- Other meds
    - Toradol 15mg (over 70yo) or 30mg (under 70yo) IV at closing if not already given
    - Zofran IV at end of procedure
- Fluid
    - **Optimize fluid status by replacing NPO and surgical deficits.**

PACU

- **Consider 500ml-1000ml crystalloid fluid bolus (or 250ml albumin if cardiac or renal issues) on arrival to PACU if case too short to replace fluid deficit, if no cardiac or renal contraindications.** Patients that are under fluid resuscitated tend to experience orthostatic hypotension, nausea, and/or headache, which prolong PACU stay and prevent work with PT. Several patients end up being admitted instead of discharged same day due to this reason.
- Consider robaxin (methocarbamol) 1000mg IV given over 15 min x1 prn for pain
- Consider IV Tylenol depending on timing of pre-op dose
- Fentanyl IV (small dose) or Dilaudid IV 0.25-0.5mg prn in Phase 1 - try to limit narcotics as much as possible so patient may be alert for PT

Boswell's Same Day Joint Preferences

Pre-op

- Acetaminophen 975mg po
- Lyrica ***Boswell's preference over gabapentin due to evidence that suggests gabapentin is ineffective in SDJ*** Available in pre-op Omnicell in 25mg and 100mg caps
    - Age 18-50: 150mg po
    - Age 51-70: 75mg po
- Celebrex
- Scopolamine patch if under 70 yo or Emend

Intra-op

- Spinal unless contraindicated. If unsure of surgical length, consider CSE and dosing epidural with lidocaine 2% PF if needed.
    - Spinal Marcaine 0.75% (NO ADDITIVES – even fentanyl can prolong duration).
        - Consider what you would give for a c-section (T4 level) and **reduce amount**
            - Total knee dosage: 1-1.4ml (typically 1.0-1.2ml, depending on patient height and age)
            - Total hip dosage: 0.8 -1.4ml (typically 1.0 ml)
        - Consider laying patient on surgical side for 5-7min after spinal placement
- If spinal contraindicated or unable to access space, consider GA with LMA for TKA

Boswell's Same Day Joint Preferences (cont'd)

- Sedation
    - Propofol infusion, or
    - Precedex infusion w/small ketamine boluses if h/o chronic pain or opioid tolerant
- Other meds
    - ***Kaiser preference*** Decadron 4mg IV at case start for anti-inflammatory benefits unless diabetic
    - Toradol 15mg (over 70yo) or 30mg (under 70yo) IV at closing **– discuss with Boswell prior to administration**
    - Zofran IV at end of procedure
- Fluid
    - **Optimize fluid status by replacing NPO and surgical deficits.**

PACU

- **Consider 500ml-1L crystalloid fluid bolus (or 250ml albumin if cardiac or renal issues) on arrival to PACU if case too short to replace fluid deficit, if no cardiac or renal contraindications.** Patients that are under fluid resuscitated tend to experience orthostatic hypotension, nausea, and/or headache, which prolong PACU stay and prevent work with PT. Several patients end up being admitted instead of discharged same day due to this reason.
- Consider robaxin (methocarbamol) 1000mg IV given over 15 min x1 prn for pain
- Consider IV Tylenol depending on timing of pre-op dose
- Fentanyl IV (small dose) or Dilaudid IV 0.25-0.5mg prn in Phase 1 - try to limit narcotics as much as possible so patient may be alert for PT

Buggs's Same Day Joint Preferences

Pre-op

- Acetaminophen 975mg po
- Gabapentin
- Celebrex
- Scopolamine patch if under 70 yo or Emend
- Adductor canal block for TKA, typically performed by Acute Pain Service

Intra-op

- **Anterior total hip surgery – GA with muscle relaxant – minimal narcotics**
- Total knee replacement – Buggs ok with spinal or GA
    - Single shot spinal or consider CSE if unsure of surgical length and dosing epidural with lidocaine 2% PF if needed.
    - Spinal Marcaine 0.75% (NO ADDITIVES – even fentanyl can prolong duration).
        - Consider what you would give for a c-section (T4 level) and **reduce amount**
            - Total knee dosage: 1-1.4ml (typically 1.0-1.2ml, depending on patient height and age)
            - Total hip dosage: 0.8 -1.4ml (typically 1.0 ml)
        - Consider laying patient on surgical side for 5-7min after spinal placement

Buggs's Same Day Joint Preferences (cont'd)

- Sedation
    - Propofol infusion, or
    - Precedex infusion w/small ketamine boluses if h/o chronic pain or opioid tolerant
- Other meds
    - ***Kaiser preference*** Decadron 4mg IV at case start for anti-inflammatory benefits unless diabetic
    - Toradol 15mg (over 70yo) or 30mg (under 70yo) IV at closing
    - Zofran IV at end of procedure
- Fluid
    - **Optimize fluid status by replacing NPO and surgical deficits.**

PACU

- **Consider 500ml-1L crystalloid fluid bolus (or 250ml albumin if cardiac or renal issues) on arrival to PACU if case too short to replace fluid deficit, if no cardiac or renal contraindications.** Patients that are under fluid resuscitated tend to experience orthostatic hypotension, nausea, and/or headache, which prolong PACU stay and prevent work with PT. Several patients end up being admitted instead of discharged same day due to this reason.
- **Early ambulation is key to reducing pain after anterior total hip surgery. It has been observed in our PACU that ambulating early eases pain often times better than IV narcotics**
- Consider robaxin (methocarbamol) 1000mg IV given over 15 min x1 prn for pain
- Consider IV Tylenol depending on timing of pre-op dose
- **Minimal narcotics only if absolutely necessary**
    - Fentanyl IV (small dose) or Dilaudid IV 0.25mg prn in Phase 1

Morris's Same Day Joint Preferences

Pre-op

- Acetaminophen 975mg po
- Gabapentin – **discuss with Morris prior to administration if patient has OSA or STOP-BANG > 3**
- Celebrex
- Scopolamine patch if under 70 yo or Emend
- Block – adductor canal block for TKA (often done in pre-op by our Acute Pain Service)

Intra-op

- Spinal unless contraindicated. If unsure of surgical length, consider CSE and dosing epidural with lidocaine 2% PF if needed.
    - Spinal Marcaine 0.75% (NO ADDITIVES – even fentanyl can prolong duration).
        - Consider what you would give for a c-section (T4 level) and **reduce amount**
            - Total knee dosage: 1-1.4ml (typically 1.0-1.2ml, depending on patient height and age)
            - Total hip dosage: 0.8 -1.4ml (typically 1.0 ml)
        - Consider laying patient on dependent/surgical side for 5-7min after spinal placement
- If spinal contraindicated or unable to access space, consider GA with LMA for TKA

Morris's Same Day Joint Preferences (cont'd)

- Sedation
    - Propofol infusion, or
    - Precedex infusion w/small ketamine boluses if h/o chronic pain or opioid tolerant
- Other meds
    - ***Kaiser preference*** Decadron 4mg IV at case start for anti-inflammatory benefits unless diabetic
    - Toradol 15mg (over 70yo) or 30mg (under 70yo) IV at closing
    - Zofran IV at end of procedure
- Fluid
    - **Optimize fluid status by replacing NPO and surgical deficits.**

PACU

- **Consider 500ml-1L crystalloid fluid bolus (or 250ml albumin if cardiac or renal issues) on arrival to PACU if case too short to replace fluid deficit, if no cardiac or renal contraindications.** Patients that are under fluid resuscitated tend to experience orthostatic hypotension, nausea, and/or headache, which prolong PACU stay and prevent work with PT. Several patients end up being admitted instead of discharged same day due to this reason.
- Consider robaxin (methocarbamol) 1000mg IV given over 15 min x1 prn for pain
- Consider IV Tylenol depending on timing of pre-op dose
- Fentanyl IV (small dose) or Dilaudid IV 0.25-0.5mg prn in Phase 1 - try to limit narcotics as much as possible so patient may be alert for PT