DAILY OR SET UP - ALL 3 ORs

To be done by resident coming on duty

1. Get sign-out on active and anticipated patients/cases from resident going off duty.
2. Perform usual room check as you would for any OR/GA, including:
    - Check circuit, machine, ETT (6.0, 6.5, 7.0), laryngoscope, standard monitors
    - Check suction
    - Epidural and spinal kits available
    - Jet ventilation apparatus and ambu bag on side of machine
    - Check drugs: All ready to go on anesthesia machine:
        - Propofol (10mg/ml) 20cc syringe and unopened 20cc bottle of propofol
        - Succinylcholine (20mg/ml) 10cc syringe and unopened 10cc bottle of succinylcholine
        - Ephedrine (5mg/ml) 5cc syringe
        - Phenylephrine (100mcg/ml) 10cc syringe attached to stopcock & 1cc syringe
        - Pitocin (10units/ml) 5cc syringe containing 4cc (40 units)
        - Phenylephrine Infusion (200mcg/ml). Add 2 ml of 10mg/ml phenylephrine to 100cc bag and put it on Alaris pump.
    - LMA's sizes 3 and 4 in bottom drawer of machine
    - Pressure bag hanging on side of anesthesia machine
    - IV set-up
3. Check location of Difficult Airway Cart and restock if used

DAILY CART SET UP (in hallway between LDR's 3 and 4 and in epidural cart closet across from LDR 9)

To be done by resident coming on duty

In drawer of cart - Ready to go:

1. 20cc syringe 3% chloroprocaine (nesacaine)
2. 20cc syringe 2% lidocaine with epi 1:400K
3. Bicarbonate
4. Bicitra

3rd DRAWER OF EPIDURAL CART

1. Phenylephrine (0.1mg/cc) 10cc syringe, change daily
2. Ephedrine (5mg/cc) 10cc syringe, change daily
3. Check laryngoscope, ETT sizes 6.0, 6.5, 7.0

ON SIDE OF CART

1. Ambu bag and O_2 cylinder

EPIDURAL BASICS

1. Consenting parturient - take history: ask week of gestation (i.e. 38 weeks), gravida + para status (i.e. G2 P1), PMH, PSH, allergies, meds, problems with pregnancy, height, weight. Cervical exam, early labor vs close to 2nd stage
    - Do directed physical exam: focus on airway but if asthma, check lungs, etc
    - Discuss epidural + risks: It is prudent to be thorough in discussing risks. For example: "As part of my job, I need to tell you about possible risks of an epidural though they may be uncommon. The risks include bleeding, infection, back pain, failed block, nerve damage, bleeding in the back referred to as hematoma, and breathing and heart problems, but these are all very small risks. There is also a 2 in 100 chance of getting something called a postdural puncture headache. This kind of headache is not dangerous and it is treatable or it goes away on its own, but it is usually a very bad headache so I just want to let you know that there is a risk for this. If you do end up getting this headache, you would usually not get it until 1-2 days from now"
2. Enter Pre-epidural PowerPlan in computer (consists of fluid bolus, bicitra, etc). Check patient's labs (particularly H/H and platelets) at this time and write them on the H&P. If it is a healthy patient with an uncomplicated pregnancy and no concern for pre-eclampsia/HELLP syndrome, or on Heparin, you do not always have to wait for the platelet count to come back (check with your attending). It is helpful to write the H/H especially in case the patient ends up coming for a Cesarean delivery or hemorrhaging.
3. DOING THE EPIDURAL - Sitting technique
    - Bring in cart/supplies, check IV is working, pre hydrate patient (LR or saline - no dextrose), place pulse ox, attach BP cuff, give 30cc bicitra po.
    - Open epidural kit and add betadine to prep dish
    - Prep back widely x 3 with betadine sponge. Attach drape.
    - Palpate space
    - Give lidocaine 1% skin wheal at L3-4, L4-5, or L2-3 with 25g needle attached to 3cc syringe
    - Advance Toughy needle through wheal approximately 3cm, remove stylet, attach LOR syringe and advance slowly
    - When you have loss of resistance, thread catheter 3-5cm
    - Give lido/epi test dose unless there is a reason not to (eg: pt already hypertensive and you don't want to give epi or you did a CSE for a c-section then give test dose prior to dosing epidural catheter): 3cc lidocaine 1.5% with epinephrine 1:200K after negative aspirate slowly over 30 seconds. If lido/epi contraindicated, do air test to rule out intravascular placement and plain lido 45mg test dose to rule out intrathecal placement.
    - Watch patient closely for 90 seconds to 3 minutes for signs of intrathecal injection (sudden analgesia, sudden sensory or motor block) or intravascular injection (tinnitus, perioral numbness, metallic taste in mouth, dizziness, palpitations) in addition to observing pulse oximeter for increased heart rate.
    - If negative test dose, tape catheter, aspirate catheter and give 5cc bupivacaine .125% (or 5cc bupivacaine 0.25%) in sitting position
    - Repeat 5cc bupivacaine .125% (or bupivacaine .25%) in 3 min if parturient able to move bilat LE.
    - Check sensory level and start infusion
    - Complete charting, don't forget Fetal Heart Rate

CONTINUOUS EPIDURAL INFUSION BAGS in pyxis

Bupivacaine 0.0625% with fentanyl 1.6ug/cc. Usually start at 7cc/hr with 7cc bolus and 7 minute lockout

TOP-UPS/TOP-OFFS (For a patient experiencing pain after the epidural placement and boluses are administered.)

1. Ask patient where she has pain. If she has rectal pressure, the OB may want to exam the patient first. If she only has supra pubic pain, she may have bladder distention and need a foley or straight cath (normally pt will already have a foley, though).
2. Check sensory level bilaterally. You may have a one-sided block. Pt can be asked to lie on the side that is still painful and then bolused. If this does not work, catheter may be pulled back 1-2cm depending on how deep it is.
3. If block is bilateral, give 5-10cc bupivacaine 0.125% or 0.25% *after negative aspiration*.
    - Notify RN that you are giving top-off. RN must be at the patient's bedside when dosing epidural.
4. Possibly add fentanyl 50ug - 100ug to above
5. Chart top ups on anesthesia chart and record 3 sets of BP's a well as FHR after top -up is given
6. If no improvement, check sensory level again and epidural site. The catheter may have migrated out of the epidural space.
7. If a patient is for VBAC, notify OB if patient still c/o pain after reasonable top-up is given with evidence of motor block.

AFTER DELIVERY

1. All paperwork must be completed. This includes time, sex of birth and APGARS. BP should be recorded every hour.
2. Catheter should be removed and this should be documented (including "tip intact"). Pumps should be disconnected and remainder of bag documented and wasted (with witness). Return paperwork to PYXIS (white copy of anesthesia record & waste sheet). The rest of the papers go in the billing bin. If there were any complications with the pt make sure the proper paperwork is filled out so that they will be followed up appropriately.

PCEA (Patient Controlled Epidural Analgesia)

1. Infusion: Bupivacaine 0.0625% with 1.6 ug/cc fentanyl at 7-10 cc/hr with 7cc demand bolus q 10 min
2. Instructions to patient: Call anesthesia resident after patient has pressed button 3 times with no or minimal relief, severe pain, hypotension or any concerns.

STAT C-SECTION with Epidural in Place

1. Ask reason for Cesarean delivery (prolonged bradycardia, late decelerations, failure to progress, category 2 or 3 FHT) and call attending immediately
2. If truly "STAT" take 20cc syringe of 3% nesacaine on anesthesia cart and add 2cc bicarb. Start giving the nesacaine quickly in labor room - 5cc-10 increments - and watch patient closely while transporting to OR. Most patients need 20-30cc of the nesacaine. Check level. Be prepared for a STAT general anesthetic if level inadequate.
3. Left uterine displacement and 100% O2 immediately in OR
   CHECK FETAL HEART RATE IN OR, IF >120 CONTINUE WITH EPIDURAL BOLUS FOR T4 LEVEL, IF <120 CONSIDER GETA
4. Place monitors.
5. Pt can still get fentanyl and Duramorph in epidural- see below

STAT C-SECTION without Epidural in Place

1. Call attending immediately and ask obstetricians reason for C-section.
2. Ask quick history and do airway exam
3. Be prepared to do a quick spinal or general anesthetic induction. Place monitors.
   - If spinal: 1.6cc bupivacaine 0.75% with glucose. For taller patients may use 1.8cc or even 2 for very tall.
     (If fentanyl and duramorph immediately available - add 10ug and 0.2mg respectively)
   - If GA: Pre oxygenate with good mask fit with patient in left uterine displacement. RSI with IV propofol, SUX, cricoid pressure. Have difficult airway box in room. See details below under Urgent C-Section.

GENERAL ANESTHESIA FOR STAT C-SECTION

1. Do quick airway exam and ask patient if any med problems, allergies. If good airway, proceed with rapid sequence induction. If bad airway, attending to decide plan- probable STAT spinal.
   REMEMBER, SPINAL ANESTHESIA IS STANDARD OF CARE FOR STAT CESAREAN DELIVERY
2. Check if patient has working IV. Maybe this should be at the start of every encounter with our parturients.
3. Bicitra premed.
   * REMEMBER, OB DOCS ALL PREPPED AND DRAPED, "KNIFE IN HAND" BEFORE INDUCING GA *
4. Preoxygenate with good mask fit- 4 vital capacity breaths, cricoid pressure
5. IV propofol and/or ketamine and sux and intubate.
6. 50% O_2 and 50% N_2O with halogenated agent, preferably ½ MAC (uterine relaxant). Vecuronium or rocuronium for paralysis. Versed if needed.
7. After baby out, 30% O_2, 70% N_2O, halogenated agent as low as pt will tolerate (turn off if atony), fentanyl, versed, zofran.
8. Extubate awake.

URGENT C-SECTION with Epidural in Place

1. Ask reason for C-section and call attending.
2. If not truly STAT, take 20cc syringe of 2% lidocaine with epi 1:400K on anesthesia cart and add 2cc bicarb. Give lidocaine in labor room with 5cc increments and check sensory-motor level. Follow and chart BP's. Give bicitra po.
3. Most patients will develop adequate level with 15-20 cc lido 2% with epi 1:400k and bicarb.
4. Get "regional" kit from drug machine. Give 100mcg fentanyl in epidural after adequate level achieved (depending on attending preference, before case or after baby out).
5. Be sure to give duramorph or dilaudid before removing epidural!! 2-3mg.
6. Put in powerplan for pts receiving neuraxial morphine.

URGENT C-SECTION without Epidural in Place

1. Ask reason for C-section and call attending.
2. Anesthesia options are spinal, epidural, general depending on situation. Be prepared for each option as attending decides.
3. Obtain focused history (PMH, any problems with pregnancy [preeclampsia, PIH, etc], hx anesthesia problems, allergies, etc) and do airway exam.

ELECTIVE C-SECTION

1. Consent patient (see "Epidural Basics") and fill out preoperative evaluation form and get other paperwork.
2. Check NPO status. Consider Famotidine and/or Metoclopramide if recent po intake.
3. Have IV Fluid running wide open. Give bicitra 30cc po within 15 min. of going to OR.
    - If spinal: 1.6cc bupiv. 0.75% with fentanyl 10ug (.2cc) and duramorph 0.2mg (.2cc) typically with epinephrine to prolong the block (these are usually for repeats or for some other complication).
    - If epidural: lidocaine 2% with epi 1:400K or 1:200K with bicarb (1cc/10cc lidocaine).
4. Complete duramorph orders.
5. If patient is at risk for postpartum hemorrhage, make sure Type & Screen or Type & Crossmatch has been sent. Routine standing orders on L & D are for Type & Hold only.
6. All C-section patients must be signed out by a resident.

FORCEPS DELIVERY with Epidural in Place

1. Take 20cc of 3% nesacaine or 2% lidocaine with epi in anesthesia cart and add 2cc bicarb.
2. Raise head of bed so that the patient is in sitting position
3. Inject 5-15cc of nesacaine in 5cc increments over 10 minutes until sacral anesthesia is achieved
4. Stay with patient until delivery and record BP's for at least 15 mins. Remember a failed forceps delivery will likely become a STAT C-section
5. Replace nesacaine or lidocaine syringe.

D & C'S AND D & E'S

1. Consent patient: (see "Epidural Basics"). Be sure to ask weeks of gestation, NPO status.
2. Spinal vs. MAC.
    - If spinal: 1.4 ml 0.75% bupivacaine.
    - If MAC: (only an option if patient is less than 12 weeks) midazolam, fentanyl +/- propofol.

BTL (Bilateral Tubal Ligation)

1. If epidural in place for delivery, working well, and the patient is stable and NPO during labor, then a BTL can be performed immediately after delivery. Give bicitra 30cc po. Inject epidural with 15- 20cc 3% nesacaine or 2% lidocaine with epi 1:400k to obtain T6- T4 block. Obtain regional kit. Can add fentanyl 50-100ug . No duramorph!
2. If patient is NPO and scheduled for BTL post-delivery day 1, then we administer a spinal anesthetic. Can add fentanyl 10ug. Bicitra premed. Have regional kit with versed available.
3. General anesthesia is not offered for BTLs since it is an elective case. Please consult with your attending if a patient is refusing a spinal.

CHARTING - VERY IMPORTANT

1. Write preop (see "Epidural Basics")
2. Legible Chart
    - Be sure to document bicitra 30cc po and "LUD" (left uterine displacement), time of delivery, APGAR scores on all charts.
    - Be sure to chart a set of vitals (BP, HR, FHR) at least once every hour for patients with a labor epidural.
    - Be sure to document top-off meds given and 3 BPs (over 15 min) after the top-off.
    - Document fentanyl given and infusion concentration and rate.
3. Postops. See and write a brief postop note for all of your patients. Place a check next to the patient's name in the black marble book in the call room after the postop is done. Call pts that are already at home.
4. All patients (C-section, labor epidurals, D & C's) should be recorded in the black marble book in call room.
5. See "Sample Epidural Record" and "Sample C-Section Record".
6. Completed anesthesia records:
    - Pink copy to chart
    - Yellow copy with billing sheet to marble book in call room
    - White copy with yellow drug form to drug machine

DAILY DUTIES

1. 7:00 A.M. start time - report to resident call room (Resident One). The 7A.M. resident is responsible for checking all anesthesia rooms, replacing drug trays, and making sure the epidural carts are stocked including syringes for c-sections. The other resident (Resident Two) comes at 8A.M and stays until 6 P.M. when the nightfloat resident comes.
2. Receive night report, give sign out.
3. Check board for elective cases.
4. Ask OB residents if there are any high risk patients and check OB board. Consent all high risk patients thoroughly.
5. Preop elective cases.
6. Postops.
7. Daily readings/discussions.

DAILY READINGS AND EXAM

Get your OB Anesthesia book from Joan prior to the rotation. Every day you will be assigned a 20 min chapter to read. That chapter will be discussed the following day as clinical duties allow. The reading schedule is posted in the call room. Please do these readings. There is an exam at the end of the month.

OB COMPLICATION BOOK (Green binder in call room)

Any patients who have a wet tap or who contact us postop with headache, nerve problems or any new problem, need to have an OB complication form completed (see book). These patients will need daily follow-up in person or via phone calls. Notify your attending of these patients. It is preferable to have the day-time attending do the follow-ups. Any patient that has a problem or complication should be given the phone no. for L & D (444-2050) and advised to call the anesthesiologist if the problem persists or worsens once she is discharged.

OB CONSULTS

Often obstetricians notify us about a high-risk patient that needs an anesthesia consult prior to term. If a RN asks you to see a consult patient, please notify your attending. A formal consult needs to be done. Completed consults will be found in the consult book (Black binder in call room).