Surgeon's Anesthesia Preferences

Ear, Nose, Throat (ENT) Surgery

SURGEON: Choudri

Preop/Induction
- No special rules. On the morning of the procedure, ensure that surgeons have marked the patient and settled all preop documents.
- Take note of whether any neuro monitoring is involved. If so, intubate with succinylcholine.

Getting Started
- Most of the cases involve neuro monitoring. Sometimes the neuro techs will need a preintubation test during which you will induce the patient and just mask until the test is complete.
- Recommend using remifentanil (50 mcg/mL) and brevital (10 mg/mL) infusions.
- Dr Choudri will not arrive until the patient has been positioned and prepped (approx 1 hour).
- Once in the OR, he will ensure that everything is to his standard. The OR table will be moved under the OR lights, etc.
- Room temperature will be VERY cold. Prepare the patient and yourself accordingly
- He will prep the C-arm in the field. This tends to crowd the anesthesia space because it will be placed between you and the patient. Be sure there are minimal lines in the way and that they are neatly organized. Push the anesthesia machine as far back toward the wall as possible.
- He will do a time out and ask you three specific questions:
  - What is the patient’s starting Hgb?
  - Have you checked the meds and allergies and given antibiotics? If so, what?
  - Are you ventilating the patient without the need for PEEP? (Rationale is that this increases thoracic pressure, thereby increasing venous return, causing an increase in bleeding.)
- When the patient is draped and they give you a sheet to place on the IV poles, there is NOT enough drape to fold. He specifically asks that the very TIP of the drape sheet is clipped to the IV poles.
- Dr Choudri prefers the least amount of noise possible. He will ask you to turn the pulse ox volume down to 1 and to silence your suction.

Anterior Cervical Discectomy and Fusion (ACDF)
- Place the patient’s head on a blue donut. Arms will be tucked.

Posterior Cervical
- Patient will be in Mayfield headframe.
- Patient will be prone with arms tucked.

Thoracic/Lumbar Spine
- Pink or shea headrest.
- Patient will be prone with arms up.

These cases can become VERY bloody, VERY quickly. Communicate with Dr Choudhri about any BP concerns associated with blood loss as soon as you notice them.
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SURGEON: Kountakis

- After induction, Dr Kountakis likes to turn the table 90 degrees with the head to the right of the anesthesia provider.
- The arm on the right should be tucked, protecting bony prominences. The left arm will be positioned at side on arm board, pillow under knees.
- Usually asks for 8-10 mg of dexamethasone to be given after induction unless contraindicated.
- The wire of the esophageal stethoscope can be wrapped around the ETT to keep the wire out of the way of the surgeon.
- Place a bite block (rolled gauze) or oral airway between the teeth to prevent the patient from biting down on the opposing teeth or the ETT upon emergence.
- Tape ETT on the left side.
- If a throat pack is used, document its placement so that it is not forgotten after the case is finished. It is good practice to leave the blue tag hanging out of the mouth so it can be seen at the end of the case.
- Tape eyes with slim pieces of tape (surgeons like to see the inner aspect of the eyes)
- Place BP cuff on left arm. He stands on the right and leans on that arm, therefore BP on right arm may be inaccurate.
- Remifentanil and propofol infusions work well for these cases. As long as the pressure stays below 100 mmHg systolic, he doesn’t have a preference for certain agents.
- With the sinus cases, prefers reduced BP until packing is complete.
- If 100 mmHg systolic is not possible due to patient’s coexisting diseases, discuss with surgeon before the case so he is aware of how low the patient’s BP can be safely dropped.
- Prefers patients to be extubated under deep anesthesia. If patient is NOT a candidate for deep extubation, let him know early in the case and he will prepare patient for awake extubation (e.g., use extra surgical packing).
- Once the nose is packed at the end of the case, you can't place a nasal airway so if preparing for deep extubation, you may want to place an oral airway before extubation.
- For patients with sleep apnea, he will place a nasal airway at the end of the case (if asked) and pack around the airway.
- He doesn’t want the patient to be breathing spontaneously during the case.
- He likes to have periodic estimated blood loss (EBL) updates. He considers most of his cases to be elective, so if EBL is high (300-350), he will consider ending the procedure and packing.
Surgeon’s Anesthesia Preferences

Ear, Nose, Throat (ENT) Surgery

SURGEON: Postma

- Airway Room. Almost all cases are done with total intravenous anesthesia (TIVA) because of the frequent use of jet ventilation in this patient population.

- Drugs:
  - Midazolam (1-2 mg at the beginning of the case)
  - Propofol infusion (typically 100-120 ug/kg/min)
  - Remifentanil infusion (typically 0.1 ug/kg/min)
  - Succinylcholine drip (concentration: 200 mg of drug in 100 mL 0.9 NS = 2 mg/mL); spike bag with microdrip infusion set (60 drops/mL). Use for cases lasting less than 25 min.
  - Rocuronium (~ 0.5 mg/kg). Use for cases lasting longer than 25 min.
  - Dexamethasone 10 mg at induction. This is an ENT request to counter postop airway swelling.
  - Glycopyrrolate (0.2-0.4 mg) at induction to counter airway secretions. Also handy because the combined parasympathetic effects of deep pharyngeal pressure during suspension laryngoscopy, remifentanil infusion and succinylcholine drip can occasionally cause significant bradycardia.

- BIS monitoring in all patients.
- IV access in left hand. Table is turned 90 degrees post induction.
- Tape eyes.
- Use neck roll after induction to extend patient’s neck for ENT.
- Check jet ventilator. Turn regulator to zero. Once jet is attached to patient, slowly bleed in pressure until chest rise is noted. Then alternate on-off cycles for oxygenation. Ventilation is less effective with jet ventilation. If this is a concern, ask ENT for temporary placement of 5.0 MLT tube to blow off CO₂.
- Airway cart with 5.0 MLT tubes, Ruesch double-cuffed rubber laser tubes (CAREFUL: these contain Latex), pediatric sized masks to ventilate through trach stoma.
- Ensure that GlideScope is available.
- Nerve stimulator for frequent monitoring of train-of-four.
- Patient must be paralyzed at all times because suspension laryngoscopy generates high pressures on jaw structures and many procedures are intratracheal.
- We have noted tremendous inter-individual variation in succinylcholine requirements.
DIRECT RIGID LARYNGOSCOPY/ENDOSCOPY

SURGEON: Jackson, Terris

- Intubate with a small ETT (6.0). Advance the cuff of this tube about 1 cm beyond the vocal cords in an average-sized adult. With all of the positioning of the neck and head with these small tubes, they have a tendency to slip out.
- Have a shoulder roll available to place under the patient's shoulders after induction.
- They often use a small doughnut headrest.
- Paralyze the patient—DO NOT ALLOW MOVEMENT.
- Depending on the speed of the resident surgeon, if a short (5 minute) case is anticipated, use a succinylcholine drip with constant neuromuscular blockade monitoring on the left ulnar nerve.
- If the surgery will take longer (approx 30 minutes), a very short-acting non-depolarizing muscle relaxant may be chosen.
- CONSTANTLY MONITOR neuromuscular blockade because of the positioning of the patient and the type of retractor being used. The patient’s jaw is cranked open and locked onto the edge of the mayo tray. Any movement or coughing by the patient could potentially break his/her jaw.
- Because blockage of the gas analyzing tubing often occurs after surgery begins, connect the gas analyzing tubing to a stop-cock or pediatric IV extension at the end closest to the patient. It is very difficult to make corrections during the case unless the anesthesia provider is receiving an accurate reading of the gases.
- Dr Terris prefers a size 6 NIMS ETT when he does his thyroidectomies and also prefers that the anesthesia provider use the GlideScope so he can see that the tube is properly placed.
- DO NOT put lidocaine on this tube or it will not work.
- The tube has to be in contact with the patient or it will not work. If the tube is too small, it may not make contact with the patient after the cuff is inflated, so KY Jelly should be utilized.
- Drs Terris and Jackson want the table turned 180 degrees. When the table is turned 180 degrees, remember to not loop the IV so it does not become kinked.
Surgeon’s Anesthesia Preferences

Ear, Nose, Throat (ENT) Surgery

ORAL SURGERY

SURGEON: Ferguson, Stevens

- Usually like to leave the table straight after induction and just pull it straight down to give the residents space around the patient’s head.
- DO NOT PARALYZE THE PATIENT unless this is requested.
- As soon as the patient arrives and has an IV started, administer glycopyrrolate (0.2 mg), and spray each nostril with a decongestant nasal spray.
- Soak the Nasal RAE Tracheal Tube, (7.0 for the average male and 6.0-6.5 for the average female) in warm water about 5-10 minutes immediately before induction. Any longer than this will make the tube too soft and unable to advance without needing the Magill forceps once it is passed through the nose. Turn the connector at the end of the tube so the connector does not poke into the patient’s head.
- Put two towels on the headrest at the top of the table. If the oral surgery residents do not wrap the patient’s head in the holding area before arriving to the OR, they will want to wrap the patient’s head with one of these towels.
- Have a couple of 6-inch pieces of 3-inch silk tape torn and readily available to tape this towel to the patient’s head.
- Induce the patient with 100% oxygen. Put lubricant of choice into nares. (I use a 5 cc syringe filled with KY Jelly to instill after I induce with the agent of choice.)
- Advance the tube as far as the pilot tube at the nose, and then connect to the breathing circuit, closing off the mouth and nose, ventilate with 100% oxygen to buy a little extra time if it is needed.
- Have Magill forceps available to the right of the patient’s head for easy availability without having to look for them.
- After the tube is in place, connect the heat and moisture exchanger (HME), put a stack of gauze between the patient and ETT and tape to patient’s forehead. Run about an arm’s length of 3-inch silk tape under the head and secure the tube to the forehead, making sure the tube is not too taut at the nares and the ears are free.
- If using the GlideScope, which is easier, there is not enough room to use the Magill forceps unless the patient has an abnormally large mouth. You’ll have to resort to the laryngoscope blade to utilize the Magill forceps.
- When using the Magill forceps, DO NOT TOUCH THE CUFF. The forceps will puncture the cuff.
- Put the esophageal stethoscope into the other nares and wrap the wire of it around the ETT to keep it out of the way or tape it to the top.
- They often place a throat pack into the patient’s mouth. Make a note of it on the chart or somewhere so it is not forgotten. If feasible, wrap the blue tag around the end of the ETT. Make sure to place the esophageal stethoscope before the throat pack or the throat pack may be pushed further down the throat.
ORAL SURGERY (Cont’d)

- Tape the eyes.
- Tuck the arms down to the sides using the draw sheet, with the thumbs pointing upwards, making sure that the bony prominences are protected.
- If the patient is turned to the side, which is done occasionally, the arm closest to the anesthesia provider can remain rested on the arm board. The ETT can be tucked under the corner of the OR table which supports it during the case and keeps it out of the way.
- Make every effort to avoid coughing and ensure a smooth emergence, (50 mg lidocaine immediately prior to extubation, deep extubation, etc.)
- Another way to avoid nasal bleeding is to advance the ETT through the nares with a red rubber Foley catheter attached. Once the red rubber catheter gets to the back of the throat, pull it through the mouth by pulling the ETT through the nares. Detach the red rubber Foley catheter from the ETT and proceed as described above.
**Surgeon's Anesthesia Preferences**

**Ear, Nose, Throat (ENT) Surgery**

**SINUS SURGERY**

**SURGEONS: Jackson, Kountakis, Terris**

- If the anesthesia machine is to the left of the patient, move the ETT to the left side of the mouth before taping.
- During sinus surgery, they gently push on the eyes periodically. Therefore, tape the eyes from top to bottom off to the lateral side of the eye.
- Dr Kountakis likes to keep the SBP between 80-90 torr to minimize blood loss.
- Drs Jackson, Kountakis, and Terris request that their patients remain under deep anesthesia for extubation. A smooth awake emergence can also be achieved with high narcotic anesthesia, lidocaine in the cuff, and breathing spontaneously.
- Because a lot of irrigation is used, ask the scrub technician to keep up with the irrigation used so the surgeon can accurately account for and document blood loss.
- Be sure to NOT give beta blockers to patients with asthma to decrease BP.
Surgeon's Anesthesia Preferences

Ear, Nose, Throat (ENT) Surgery

THYROID SURGERY

Surgeon Terris

Preoperative
- Cases start at 0815 on Mondays at 0715 all other days.
- Please be sure that the patient is marked by Dr Terris prior to coming to the OR. Make sure the neck is marked.
- Nearly every patient gets 1 g A
cef.
- IV Tylenol on all patients unless allergic (optional).

Operating Room
- Table will be turned 180 degrees after intubation, so arrange lines accordingly.
- Dr Terris prefers the OR staff speak minimally so that his residents can hear him.
- The OR will be VERY chilly.
- You will need 2 syringe pumps, a GlideScope, blue donuts for headrests, and a NIM ETT for every case.
- Use TERRIS template for CompuRecord.

Induction
- Goal is to induce and place ETT prior to his arrival in the OR.
- Drugs: 50 lidocaine, 100 fentanyl, 150-200 propofol, 20 rocuronium (100 succinylcholine).
- Place BIS and temperature probe prior to ETT.
- Tape ETT midline. Use regular stylet, NOT the GlideScope stylet, to intubate.
- Surgeons will be ready for the bed to be turned PROMPTLY after the tube is placed. Arms will be tucked.
- Attach GTTS (remifentanil and propofol) after bed is turned 180 degrees.

Maintenance
- NO MUSCLE RELAXANTS.
- MAC of agent doesn’t affect NIM monitoring.

Emergence
- Turn GTTS off when thyroid is out, flush line to remove excess drug, increase CO₂, and get the patient to breathe.
- Strive for all patients to have deep extubation.
  o Keep table turned 180 degrees.
  o Attending is at the machine with the anesthetist at the head.
  o Suction patient, deepen anesthesia with agent, and pull ETT.
  o Use jaw thrust to open airway and allow patient to blow off the gas.

PACU
- NO TORADOL.
- Strive for quick turnovers. Goal is 25 minutes. Therefore, drugs, etc., should be ready for the next case before you leave the room so that there is no need to return before getting the next patient.