**Informal EES Feedback Notes**

**23-Sep-2016: Dr. Cushing & Dr. James:**

Q – Reasons to use endoscopy:

A – 1. avoiding incision which will be best for the patient 2. Endoscope allows visualization where traditionally you can’t 3. Surgeons want to use the latest skills and techniques

Q – What instruments should be developed?

A – making instruments go where we are looking, this is true for the microscope. Need to increase the reach with the end of the instrument used with endoscopic surgery. Want to access the deep facial recess, antrum.

* Combining functions eg. Combine suction with other instruments
* Ensure the instruments are similar to existing tools that surgeons are already familiar with in terms of looks, feel and grip – don’t want to learn to use a new instrument
* Use only a few instruments out of the set

Q – why use certain instruments? What are their advantages?

A - If the blade has the same curve as Rosen = more beneficial than straight

* Getting the graft in is tricky and requires ‘macro’ moves – making macro moves with the endoscope is tricky

Problem: putting tissues in tension with the non-dominant hand. Eg. Want to hold tissue while cutting it. Solution idea: suction slider along the endoscope, have a ‘clip’ to hold things like the malleus in place – currently using the cotton balls.

* Flexible sucker to bend in shape – ANSPNCH – irrigation tube

Problem: bleeding – develop instruments like cautery – add insulation to a tool

**27-Sep-2016: Dr. Papsin**

Disadvantages:

* don’t like **one-handed surgery** but Panetti round knife and left and right suction have made the process easier and caused him to use EES
* **visualization**:
  + good for smaller scopes but
  + missing a lot of visualization on the sides
  + need to move the endoscope in and out frequently to get the whole picture
  + hard to adjust from the microscope
  + left hand is considered a ‘holder’
* **steep learning curve** – require training with blood
* time to decision. (decision = to use microscope or endoscope?)
  + waste time raising the flap, looking around, dissecting, it is difficult and doubles the time and he ends up using the microscope in the end and opening up the ear – where he has found a tumor which would not be visible by endoscope
  + the indication for endoscope should be tympanoplasty and cholesteatoma
  + need to make the decision to use endoscope with additional imaging to ensure endoscope will in fact be the right tool
* takes a long time
* no research study that shows it really is worth while
* keep doing endoscopic ear surgery because:
  + endoscopically assisted microscope surgery – but know that the endoscope is most likely not going to help because it won’t fit into the tiny incision

Make it easier by:

* smaller, shorter scopes
* endoscope holder to free a hand and if can use that hand – that’s even better
* self-cleaning tips
* lock in place positioning to find the target for the endoscope and fix it there to free up the second hand

Advantage:

* allows you to understand the microanatomy of the middle ear
* good teaching tool because everyone can see
* no scar morbidity

Why use the endoscope?

* when surgery is done, no need to close
* saves opening and closing time
* but endoscopic surgery process already takes a lot of time and still takes longer than the time gained by not having to open and close

Instrumentation:

* self-cleaning tip for endoscope (like windshield wipers) to reduce the number of times the endoscope is removed from the ear, and suction that can slide
* wristed flexible endoscope – for transoral laser surgery
* robotic wrist that goes to the target and fixes into place
* TORS – size of instruments are too big for oral robotic surgery
* Shaft size = smaller, stiffer but want suction integration

Reason for not adopting endoscopic ear surgery – surgeons feel inferior and don’t have a good reason for not using it

Ask surgeons informally what keeps them from using EES? – can compile these informal interviews into a questionnaire – tell them this is informal and confidential

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Visiting faculty for the course

**Questions:**

1. What do you think about EES?
   1. Why do you do it or not do it?
   2. What are the advantages?
   3. When do you do it?
2. What do you think about the limitations of what can be done via endoscope?
   1. How much of those limitations are due to the instruments available?
   2. How do you think instruments can be improved to ease EES?
   3. What are things that you find difficult? What would put you off it? How can we overcome these obstacles?
3. (can bring up previous ideas for example: ) Do you require greater reach? What do you want instruments to do when reach is accomplished?
4. Do you need to put tissues in tension to facilitate the other hand’s function? For example to aid in cutting?
5. Do you require bleeding control?