Teaching advanced episiotomy repair with a beef tongue model

BEEF TONGUE EPISIOTOMY WORKSHOP MANUAL

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Credit and Acknowledgement

You are welcome to modify and use this material in any way for educational purposes so long as you do not receive any profit, other than the satisfaction of having well trained physicians. When you do use this material, please be sure to credit Dr. Sauerwein who originally developed this workshop and refined it over the years.

If you have comments or questions, you may send them to:

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Introduction

The opportunity for observing and doing episiotomy repair is probably less than 10-15 years ago when a more unrestricted policy of episiotomy was practiced in obstetrics. Additionally, opportunities to repair 3\textsuperscript{rd} and 4\textsuperscript{th} degree lacerations are also limited. Depending on the obstetrical volume in a particular residency, getting to repair complicated lacerations may be rare. Teaching repair using a model involving hands on techniques enhances residents' experience and a workshop given early in residency training provides an unpressured conceptual and procedural base with which to build their further experiences. A beef tongue model has been used in a community residency program for the last 6 years. According to resident feedback, it has been very helpful. We wish to offer this model to our colleagues as an innovative way of teaching this important skill in residency.

Objectives

1. To demonstrate preparation of a beef tongue model

2. To demonstrate features of the model that are unique to mimicking 3\textsuperscript{rd} and 4\textsuperscript{th} degree lacerations of the perineum, especially its ability to mimic real tissue.

Time required

1 – 2 hours for model preparation (first time through leave at least 2 hours)

2 – 3 hours for the workshop

Lecture

Didactic sessions may either be woven into the workshop or given as a brief presentation prior to beginning the hands on session. Consider using our video as a teaching tool.

Classroom set up

You will need tables that will accommodate the model and for residents to sit opposite each other in pairs. Each pair of residents will work on one tongue.

Faculty preceptors

Our experience is that 2-3 faculty are needed for 10-12 residents. This workshop is based upon hands on teaching. This is a fun exercise to invite the volunteer community faculty who help your residents do deliveries in your setting.
Equipment needed

For each PAIR of residents you need:

One beef tongue prepared in advance (see separate preparation list, page 6)
Chux or other absorbable work surface
Non sterile gloves (several pairs)
2 needle drivers
2 thumb forceps
1 pair Alice clamps
(Gelpey retractor optional)
4-O suture on SH or GI needle (2-3 packs)
3-O suture on CT-1 or SH needle (6-8 sutures)
2-O suture could also be used for sphincter repair and routine repair

Comment: In order to keep the budget down, try to gather used equipment if at all possible, it is hard on your clinic supplies to put this all together. We save hospital OR suture that has expired, and ask for all sutures that are appropriate for almost a whole year in order to get enough. You could also get opened but unused suture from labor and delivery. It is helpful to try to approximate the needle sizes and suture sizes as much as possible. Hemostats can be substituted for the Alice clamps. Gelpey retractors are hard to come by used; but would add a good dose of realism.
PREPARATION OF BEEF TONGUE

Items needed:

- Beef tongue, purchase from wholesaler if possible or grocery store, prices vary from 3-5 dollars/pound! Purchase a whole tongue for every 2 residents.

- “Surgical tubing” I usually purchase this at an outdoor store that sells fishing gear. Fisherman use surgical tubing for attaching lead weight to their jigs and set ups. I would buy about 2-3 feet depending on how many models to make.

- Vinyl tubing any color, although black for demonstrating lumen is helpful. I usually buy 2-3 feet of 1-inch.

- Colored yarn with purple or red hues for inserting inside the surgical tubing for imitating muscle

- Suture of any type that is strong enough to sew in the surgical tubing

- Scalpel

- Scissors

- Long strait hemostat

- Small Kelley clamp
Step by Step Preparation of the Beef Tongue Model

1. Unpack beef tongue, rinse and dry with paper towels.

2. Cut the distal aspect of the tongue off from the main muscular portion.
   
   Note: This piece (on the right) can be saved and frozen for suture workshops

3. Orient the tongue so that the vallecular surface is superior.
4. Make stab wounds on both sides of the tongue for the rectum, underneath where the vertical incision (episiotomy) will run.
5. Pass the long strait hemostat through the body of the tongue using the stab wounds and spread the tissue for insertion of the vinyl tube which will be the rectum.

6. Pull the tubing through the body of the tongue in the track created by the hemostat with the same method used in inserting a surgical drain through the abdominal wall.
7. Make a vertical incision from the superior surface of the tongue to just above the superior portion of the rectal tube (you can make 4-6 total incisions in the tongue, 2-3 on each side, usually only one pair of incisions with the rectal tube; the rest of the incisions can be designed to mimic routine 2nd degree lacerations or other variations.
8. Create 2 stab wounds superior to the rectum and juxtaposition with the inferior apex of the episiotomy incision

9. Pull a piece of surgical tubing from inside the incision through the stab wounds outside to create the rectal sphincter muscle.
11. Sew the tubing in place to anchor each side of the sphincters.
12. Optional step, mark the hymeneal ring on the vallecular surface with a marking pen or a stitch.

13. The sphincters can be cut before or during the workshop to demonstrate the 3rd and 4th degree lacerations. The sphincters are cut with either a scalpel or heavy scissors from the inferior portion of the 'episiotomy' incision to the plastic tube.

Note: We usually make just one complex laceration for each resident, one on each side of the tongue. They can also practice a “routine” 2nd degree repair, or as a third possibility, a bilateral sulcus tear.