Technical Skills Practice Laboratory

Basic Skills Curriculum

Target Participants

1st and 2nd year surgery residents

Time/Place

Early in the year, the 1st and 2nd year residents are introduced to the goals and objectives of the curriculum in the Technical Skills Practice Lab. This is taught in a 1-2 hour session by an experienced upper level resident, attending, and a CFA experienced with laparoscopic equipment.

The residents will practice at least one hour a week in the Technical Skills Practice Lab.

Goals

The junior surgery resident will get a sound foundation in applying basic surgical techniques, both open and laparoscopic.

Curriculum

1. The didactic curriculum consists of a DVD based lecture series (Laparoscopy 101) and selected reading material on surgical techniques for independent studies.

2. The main part of the curriculum is the hands on practice stations divided into two main areas: Open Techniques (3 stations) and Laparoscopic Techniques (3 stations).

A. Open Techniques

Objectives

1. 1st and 2nd year residents will be able to perform one and two handed ties using 0 and 3-0 braiding suture and 0 and 6-0 monofilament tie. The residents will be able to place five square knots within the allotted time period (with acceptable quality as judged by an instructor) and show proficiency in placing slip knots.

2. The residents will be able to perform simple suture techniques using various sizes of sutures and needles including vertical and horizontal mattress, subcuticular, and locking suture techniques.
3. The residents will be able to perform a side-to-side and an end-to-side vascular anastamosis using artificial graft material and fine monofilament sutures (5-0 or 6-0) within the allotted time and with the quality acceptable to the instructor.

**Practice Stations**

**Practice Station 1**

The residents will practice knot tying skills using a knot tying kit (Ethicon®). The appropriate size ties are available and suture tying manuals are available in the Technical Skills Practice Lab.

**Practice Station 2**

Forceps, needle holders with the appropriate size sutures, foam, and towel are at this station to allow the residents to practice suture techniques imitating wound closure.

**Practice Station 3**

Forceps, needle holders, and the appropriate size sutures are at this station with different size Gortex and Dacron graft material to practice vascular anastamosis.

**B. Laparoscopic Techniques**

**Objectives**

1. The residents will become familiar with, and learn to use proficiently, the different instruments, camera equipment, and monitors associated with laparoscopic surgery.

2. The residents will become adept in using simple laparoscopic instruments in moving objects from place A to place B within a mannequin, using a laparoscopic camera, monitor and routinely used instruments.

3. The residents will be able to form a task imitating “running the bowel” using a piece of rope and mastering the hand over hand method using simple graspers and laparoscopic visualization.

4. The resident will become proficient in tying intracorporeal sutures using standard two handed technique and an Endostitch.
Practice Stations

Practice Station 1

The residents will practice on the laparoscopic simulator moving objects from one area to another within the simulated torso using one and/or two handed techniques.

Practice Station 2

The resident will use the laparoscopic simulator and, using a piece of rope, practice running it from one end to the other simulating “running the bowel” and mastering the hand over hand method.

Practice Station 3

A laparoscopic simulator is set up so the residents can practice intracorporeal knot tying and suture placement by suturing interfoam within the simulated torso and practicing both standard techniques and Endostitch.

Performance Evaluation

1. The residents will perform the test after each module on the Laparoscopy 101 DVD and the results will be reported to the Program Director.
2. An attendance sheet will be kept documenting the residents’ practice at the various stations
3. A structured assessment evaluation will occur quarterly. The residents will be expected to demonstrate their skills in all six stations where they perform the practice tests within a certain allotted time. The quality of their performance will be evaluated by an attending.
4. Evaluation form will be filled out for each station grading the resident performance on a scale of pass, needs improvement, or fail.

Incentive

At the end of the year, the junior level residents will have a competition in some or all of the above tasks. The winner will receive a prize and the title of “Master of the Technical Skills Practice Lab” until the next competition.