Laparoscopic Salpingectomy for Ectopic Pregnancy Simulation

Preparation

Simulators to be used

1. Laparoscopic box trainers will be used
2. Laparoscopic Maryland graspers, laparoscopic endoshears and a locking grasper will be available for each participant
3. Premade uterus (from the Laparoscopic ovarian cystectomy simulation) with regular ovaries

Materials

a. Laparoscopic box trainer
b. Maryland grasper, endoshears, locking grasper
c. Preconstructed uterus (from Laparoscopic ovarian cystectomy simulation)
d. Suture and alligator clamp/ notebook clip
e. clown balloons – cut in half and one end cut to represent fimbriae
f. 5-inch balloons
g. Cotton
h. Red/ purple food dye
i. Kelly® type clamps
j. Gel hand sanitizer
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Figures

Figure 1. Simulated uterus, tubes and bilateral ovaries

Figure 2: Simulated uterus, ovaries and right ectopic pregnancy E. Britton Chahine, M.D.
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Figure 3. Construction of ectopic pregnancy

a. Cut the clown balloon in half, and make small cuts at one end to simulate fallopian tubes
b. Take a small piece of cotton and dye it with the food coloring
c. Use a bit of gel hand sanitizer to act as a lubricant on your instruments
d. Place Kelly® clamp into the balloon and stretch the opening.
e. Take another Kelly® clamp and grasp the cotton “ectopic” and place it into the balloon.
f. You may dye the end of the fallopian tube if desired.

To construct noncystic ovaries:
- Place a cotton ball into a 5 inch balloon and knot the end
- Secure the uterus with the attached ovaries and tubes/ectopic pregnancy into the laparoscopic box trainer as done for the laparoscopic ovarian cystectomy simulation.
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Figure 4: Attached uterus with ectopic pregnancy

Figure 5: Salpingostomy
Figure 6: Removal of ectopic

Figure 7: Salpingectomy
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Sequence of Lab

1. The laparoscopic box trainers will be set up as described in the preparation portion of the simulation exercise.
2. The learner will describe the process of a time out
3. The learner will describe the proper positioning of a patient
4. The learner will describe the proper set up of the camera equipment, tubing, and energy sources
5. The learner will call for and properly identify the instruments used in the simulation. Per the simulation exercise- Maryland graspers, endoshears, and a locking grasper. The learner may also call for what other instruments they may use in the actual operating room
6. The learner will describe the method upon he/she would gain access to the abdominal cavity
7. The learner will discuss the method that he/she would choose to obtain appropriate pneumoperitoneum via veres needle, Hassan method, direct trocar insertion, or left upper quadrant insertion
8. The learner will identify and describes key surgical anatomy
9. The learner will describe safe secondary trocar placement
10. The learner will identify the ectopic pregnancy site
11. The learner will evaluate the opposite fallopian tube
12. The learner will grasp, position, and orient the fallopian tube
13. The learner will perform a salpingectomy using the Maryland graspers, endoshears, and a locking grasper and:
   a. Identify/discuss cutting through the mesosalpinx
   b. Identify/discuss cutting through the fallopian tube
   c. Identify/discuss proper technique to utilize to avoid injury to the ovary
14. The learner could describe how to perform a salpingectomy using bipolar cautery with manual scissors, a harmonic scalpel, loop ligature, or an automated stapling device
15. The learner will describe securing hemostasis
16. The learner will describe how he/she would retrieve the specimen
17. The learner will describe how he/she would confirm hemostasis
18. The learner will describe proper removal of trocars under direct visualization
19. The learner will describe the proper closure of the fascial defect after trocar removal
20. The learner will describe the proper closure of the skin incisions

Competency Assessment

The resident is able to conduct a time out prior to beginning the laparoscopic salpingectomy for an ectopic pregnancy. The resident completes the laparoscopic salpingectomy in the correct manner demonstrating with proper instruments and/or discussing the use of other instruments to complete the task. The resident will be able to describe proper and safe technique for fascial and skin closure in a laparoscopic salpingectomy.