

## Scenario Overview

### Summary\*

Mrs. Jane Farren 58-year-old woman undergoing an exploratory laparotomy for retention of a retained surgical item. Her medical history is notable for an abdominal hysterectomy 4 weeks ago for endometrial cancer. She presented to an outside hospital with approximately four days of increasing pelvic and abdominal pain. Three days ago, she had a small breakfast and could leave the house to do an errand, despite feeling unwell. Two days prior to admission, she c/o 'stomach ache'. She woke up in the middle of the night with increasing abdominal pain, and vomited once as well. At this point, her husband brought to the outside hospital ED for further evaluation.

CT scan revealed a retained foreign body most likely a surgical pack in the patient's upper gastric area. Patient explained that she had a hysterectomy three weeks ago and requested transfer to her original surgeon for evaluation and removal.

### Past Medical History

- ◆ Asthma
- ◆ Diabetic Type II
- ◆ Obesity

### Past Surgical History

- ◆ Tonsillectomy (1964)
- ◆ Appendectomy (1978)
- ◆ Abdominal Hysterectomy (three weeks ago)

### Setting

Simulation Operating room or OR not in use

### Time

Pre-brief: 5 minutes

Simulation: 10 minutes

Debrief: 20 minutes

### Participants

Interdisciplinary team

- ◆ Surgeon
- ◆ First assistant (RN or MD)
- ◆ Anesthesiologist and/or Certified registered nurse anesthetist (CRNA)
- ◆ RN circulator
- ◆ Scrub person
- ◆ Nurse assistant and/or perioperative care technician

### Embedded simulation personnel

Observers

### Potential Systems Explored

Roles of the perioperative team members during a retention of surgical item event

Supporting technical and developmental skills

Interprofessional training in communication and professionalism

*\*complete History and Physical included in this scenario on page 6.*

### Learning Objectives

1. The learner will identify proper protocols for patient with a known retained foreign item
2. The learner will demonstrate proficiency with documentation requirements related to retention of a foreign item
3. The learner will demonstrate multidisciplinary team closed looped communication within the OR.

## Participant Preparation

### Pre-Simulation

Read the article:

Fencil, J. L. (2016). Guideline Implementation: Prevention of retained surgical items. *AORN journal*, 104 (1), 37-48

Review the facility policy on documentation and reporting mechanisms of retained surgical items.

### Standard Introduction

#### Modify if necessary.

1. Sign in and obtain participant consents for video or research, if necessary
2. Have participants introduce themselves
  - a. Specialty, experience and role
  - b. Something personal
3. Orient participants to simulation process
  - a. Briefing
  - b. Case (simulation)
  - c. Debriefing-Discuss and review what went well and where there are opportunities for improvement
  - d. Feedback and closing
4. Discuss course objectives
5. Describe learning environment
  - a. Simulation is a safe and confidential learning environment
  - b. Acknowledge anxiety
  - c. Assure confidentiality of participant's performance and case
  - d. Obtain buy-in for simulation activities. Treat as a real-life situation, given the limitations of working with a mannequin, simulated medications, etc.
    - ◇ Treat this patient as if it was your perioperative patient.
    - ◇ Inject medications as usual
  - e. You will be video recorded for purposes of debriefing. The video will be destroyed/deleted per the simulation laboratory guidelines.
6. Discuss expectations of participants
  - a. Clinical role (be yourself)
  - b. Assure participants that the embedded simulation people are there to help them and there are no tricks.
  - c. Agree on a code word for a real event (Simulation will end immediately)
7. Identify equipment that is live or partially functional and explain any related safety issues
  - a. Mannequin
  - b. Defibrillators/emergency equipment
  - c. Cameras
  - d. Vital signs displayed on monitoring devices
  - e. Phone list
  - f. Documentation
8. Orient participants to patient situation and assumed roles; provide role cards if applicable
  - a. "It is 10:00 am on a Thursday and you are taking care of a patient with...."
  - b. "Your table is set up and all items have been counted...."
  - c. "You will start with conducting a time out...."
9. Ask the "float/supporting" personnel to leave the simulation environment and await communication they would receive during an actual crisis.
10. Ask participants if there are any questions before beginning
  - a. Answer any additional questions/clarify shared mental model
  - b. Announce that the simulation is starting

## Set-up

### Room

Simulation operating room (OR) or OR not in use

Note: If not in a dedicated simulation setting, consider medication safety and infection control issues.

### Equipment and Supplies

OR table

Mannequin

Identification band for the mannequin

IV solution and tubing

Instrument table with basic set up for an exploratory laparoscopy (laparotomy instruments and open supplies should be on standby)

Mayo stand basic set up

Electrosurgical unit

Anesthesia machine equipped as facility protocol

### Medications\*

Provide: Antibiotic irrigation on surgical table labeled per hospital policy

\*Consider the simulation environment when preparing medications. Be sure that all medications are clearly labeled and identified as simulated if applicable. Simulated medications should not be available in any patient care areas.

### Simulator Preparation

Mannequin

Intubate with an ETT

Place IV in right arm

Simulator program (vital signs, responses, etc)

Positioning: This patient will be supine on an OR bed with arms extended <90\*

Abdominal model should be prepared with bloody laparotomy pack under the liver (see photo)

Patient documentation

Safety report requirement

## Patient Information (History and Physical)

**NAME:** Farren, Jane

**MRN:** 000992233

**DOB:** 06/26/1956

### HISTORY & PHYSICAL

**CC:** Abdominal pain **HPI:** 58 yo woman who presented to an outside hospital with approximately four days of increasing pelvic and abdominal pain. S/P Laparoscopic Hysterectomy converted to Abdominal Hysterectomy for endometrial cancer. Three days ago, she had a small breakfast and could leave the house to do an errand, despite feeling unwell. Two days prior to admission, she c/o 'stomach ache'. She woke up in the middle of the night with increasing abdominal pain, and vomited once as well. At this point, her husband brought her to the outside hospital ED for further evaluation.

CT scan revealed a retained foreign body most likely a surgical pack in the patient's upper gastric area. Patient explained that she had a hysterectomy three weeks ago and requested transfer to her original surgeon for evaluation and removal.

### **ROS:**

No night sweats, weight loss, headache, blurry vision, SOB, chest pain, wheezing, dysuria, diarrhea, rashes

(+) subjective fever, tiredness, anorexia, nausea/vomiting, abdominal pain

**PMH:** Asthma, Diabetic Type II, Obesity

**PSH:** Tonsillectomy (1964), Appendectomy (1978), Abdominal Hysterectomy (three weeks ago)

**ANESTH Hx:** No problems with prior anesthetics; no family hx of malignant hyperthermia

### **MEDS:**

Advair inhaler PRN (last use approximately 4 weeks ago)

Metformin 100 mg twice a day

Lantus 40 units subcutaneous at bedtime

Lipitor 40mg once a day

Synthroid 80mcg once a day

Lexapro 20mg once a day

**ALLERGIES:** NKA

**SHX:** Works FT as secretary, lives at home, married w/three adult children; occasional alcohol, no IV drug use, no smoking.

### **PEX:**

Height: 67 inches / 170 cm

Weight: 205 lbs / 93 kg

VS: BP 138/80, HR 110, Temp 39.1 C, RR 18, Oxygen saturation

96% on 2 L/min nasal cannula oxygen

GEN: Uncomfortable, quiet, alert and oriented x 3

NEURO: Nonfocal, CN II-XII grossly intact, no weakness

HEENT: Mallampati 1, Normal neck range of motion, Thyromental normal, good dentition

CV: RRR, normal s1 / s2, no murmurs

RESP: Lungs with occasional rhonchi, but no wheezing or rales

ABD: Soft w/ diffuse tenderness to palpation; worse in RUQ; (+) guarding; 2+ tenderness at McBurney's point, (+) rebound in RLQ, (+) Rovsing's sign; bowel sounds soft / hypoactive

RECTAL: No masses, some tenderness on right

SKIN: Dry, warm, no rashes or lesions, normal capillary refill

**IMAGING:** CT scan: Compatible

### **LABS / TESTS:**

#### **CBC**

WBC 13,000 (80% neutrophils, 11% lymphocytes);

Hct 41.6

PLT 160,000

#### **BMP**

Na 138

K 3.5,

Cl 98,

HCO3 19

BUN 15

Cr 0.95

GLU 117

Ca 8.3

Phos 2.3

Mg 1.7

**ABG:** pH 7.28, PCO2 34, PO2 90 (room air)

**Lactate:** 5

### **ASSESSMENT / PLAN:**

Obese female s/p Abdominal Hysterectomy for endometrial cancer procedure with hx asthma and diabetes that has CT findings consistent with .....?

To OR as soon as possible for removal of retained surgical square pack.

ASA Class: 3 E

Admit to: Dr. Jones, General Surgeon

Diet: NPO

IV Fluids: LR @ 80 mL/hr

Medications: morphine 1-2 mg IV Q1h PRN pain; Zofran 4mg IV

Q6h PRN N/V

Code status: Full

## Sequence of Events

1. Participants are given patient H & P (as above with lab including assessment and plan) in room adjacent to the mock OR.
2. Participants will conduct a huddle or time out (if that is the facility practice) and then enter the OR.
3. Patient is intubated and prepped and draped
4. Participants enter the OR after the laparoscopy and the team will be instructed to start opening
5. Account for all laparoscopic instruments before conversion to open case
6. Count all new or additional sutures, needles, raytec/packs, etc.
7. Incision is made by surgeons (alternately, the abdomen will already be opened). Team will conduct exploratory laparotomy and remove the pack
8. Retrieve the pack; copious irrigation and antibiotics, incision closed.
9. Another count before closure of abdominal cavity
10. Nurse will document in patient's record, call for x-ray, complete safety report

**Skills Assessment**

Continue with the simulation until the following action/treatments are completed. Treatment action time points are referenced from time of crisis announcement

<b>Action/Treatment Checklist</b>	<b>Time</b>	<b>Skill met</b>	<b>Skill not met</b>
Conduct timeout			
Document all surgical items before incision is made			
Remove retained item			
Complete closing counts			
Call for X ray			
Document as per hospital requirements			
Team discuss safety reporting			
Family interaction			



### Debrief

Modify if necessary. This text should be appropriate for all scenarios.

Begin debriefing by soliciting the participant's reactions to the simulation experience.

Clarify with the team the patient situation so that everyone is on the same page.

1. Clarify confidentiality and expectations.
2. Review the learning objectives.
3. Discuss what happened in the simulation.
4. Review what went well.
5. Consider opportunities for improvement.
6. Encourage expression of reactions.
7. Ask participants:
  - ◆ "How did participating in this simulation make you feel?"
  - ◆ "Describe your thinking when...?"
  - ◆ "Were there performance gaps?"
  - ◆ "What could be changed in the OR?"
8. Review the participant's roles and team expectations.
9. Review principles of effective interprofessional teamwork.
10. Review expectations for effective communication.
11. Discuss appropriate post-event actions:
  - ◆ Consider keeping the patient intubated and sedated.
  - ◆ Monitor the patient for 24 hours post-recovery.
12. Identify learner issues.

## Resources

- Freitas, P. S., Silveira, R. C. D. C. P., Clark, A. M., & Galvão, C. M. (2016). Surgical count process for prevention of retained surgical items: an integrative review. *Journal of clinical nursing, 25*(13-14), 1835-1847.
- Stawicki, S. P., Cook, C. H., Anderson III, H. L., Chowayou, L., Cipolla, J., Ahmed, H. M., ... & Adams, R. C. (2014). Natural history of retained surgical items supports the need for team training, early recognition, and prompt retrieval. *The American Journal of Surgery, 208*(1), 65-72.
- Fencl, J. L. (2016). Guideline Implementation: Prevention of retained surgical items. *AORN journal, 104*(1), 37-48.
- Gualniera, P., & Scurria, S. (2018). Retained surgical sponge: Medicolegal aspects. *Legal Medicine, 31*, 78-81.
- Williams, T. L., Tung, D. K., Steelman, V. M., Chang, P. K., & Szekendi, M. K. (2014). Retained surgical sponges: findings from incident reports and a cost-benefit analysis of radiofrequency technology. *Journal of the American College of Surgeons, 219*(3), 354-364.

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## Perioperative Simulation Scenarios

### Pre/Post Test

- When a retained surgical item is found, the original closing counts have more often been reported as correct  
True or False
- AORN recommends which of the following statements regarding closing counts. (choose all correct answers)
  - All perioperative team members are responsible for preventing RSI events.
  - Distractions, noise, and interruptions should be minimized during surgical counts.
  - A second circulator should assist with the closing count.
  - All of the above
- A Retained Surgical Item (RSI) is considered:
  - A preventable error
  - A never event
  - Is reportable to the joint commission
  - Is a patient safety problem.
  - All of the above
- When closing the abdominal cavity it is determined that a square pack is unaccounted for. There are 20 square packs listed on the whiteboard; 3 packs are on the sterile field, 10 packs are off the field, and 6 packs on the back table. What is the best series of events to take when looking for an RSI?
  - The surgeon continues to close while scrub tech and circulator look around the area for the square pack and notify the manager of the missing item.
  - Circulator advises the surgeon there is a missing square pack, surgeon looks for item in the abdominal cavity, scrub tech & circulator look around the sterile field/sterile back table, & off the sterile field, surgeon orders x-ray, & notify manager.
  - Surgeon is advised of missing square pack, abdomen is closed, x-ray is ordered in PACU, documentation that count is incorrect, & sentinel event is reported.
  - None of the above.
- What is AORN's recommended order of the count process?
  - Operating site area, sterile surgical field, mayo stand, back table & basins, items off the sterile field (kick bucket or case cart).
  - Mayo stand, back table & basins, sterile surgical field, operating site, items off the sterile field (kick bucket or case cart).
  - Items off the sterile field (kick bucket or case cart), mayo stand, back table & basins, sterile surgical field,
- operating site.
  - There is no correct way as long as you count.
- What consequences from an RSI may a patient experience?
  - Fistula formation
  - Increased length of hospital stay
  - Perforation
  - Return to surgery to remove item
  - Sepsis
    - a & d
    - a, c, & d
    - a, b, d, & e
    - All of the above
- Standardizing the counting process includes all of the following except:
  - The sequence of the count process
  - What is counted
  - Who conducts the count process
  - Where counts are recorded
  - Only two counts are necessary
- A count discrepancy occurs anytime the quantity of items reflected on the whiteboard or standardized count sheet does not match the quantity of items count on & off the sterile field  
True or False
- It is not necessary to document in the patient's medical record that there is a possible RSI & what the items is?  
True or False
- All the following statements are true except:
  - Individuals who perform surgical counts need to be identified on the EMR.
  - Policies & Procedures for the prevention of RSIs should be revised periodically by the OR Team.
  - Actions taken during a count discrepancy need to be documented in the EMR.
  - Error & near miss reporting is the first-step to addressing RSI incidents.
- At the end of a procedure you find that you are missing a clipped sponge. What is the first thing you do?
  - Recount sponges
  - Search the OR
  - Call for x-ray
  - Ask the surgeon what he/she wants
- A patient has expired in the OR and the surgeon tells you that a sponge count is unnecessary.

**Pre/Post Test Answers**

1. True
2. A and B
3. E
4. B
5. A
6. 4
7. E
8. True
9. False
10. B
11. A
12. B

Images



Laparoscopy Abdominal Model



Intra-abdominal Model (Image on Laparoscopy Monitor)

**Photos M. Hemingway**