

WebM&M

Morbidity and Mortality Rounds on the Web

Spotlight

Two Cases of Retained Vaginal Packing: When Writing an Order is Not Enough



Agency for Healthcare Research and Quality
Advancing Excellence in Health Care



Source and Credits

- This presentation is based on the April 2021 AHRQ WebM&M Spotlight Case
 - See the full article at <https://psnet.ahrq.gov/webmm>
 - CME credit is available
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- AHRQ WebM&M Editors in Chief: Patrick Romano, MD, MPH and Debra Bakerjian, PhD, APRN, RN
 - Spotlight Editors: Ulfat Shaikh, MD, and Jacqueline Stocking, PhD, RN
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Objectives

At the conclusion of this educational activity, participants should be able to:

- Describe the difference between a cavity, an orifice, and a wound as a location where packing material may be retained.
- Explain why the vagina is a relatively common site for retained packing after obstetric and surgical procedures.
- Identify the characteristics of safer packing materials to use in an orifice.
- Design a set of “best practices” in the operating room and postoperative care units to minimize the risk of retained vaginal packing, including use of patient armbands, electronic or written tracking tools, timely handoffs by primary sources, repeated patient education, and avoidance of workarounds.
- Describe the importance of nurse-to-nurse collaboration and other educational and cultural activities to overcome a clinician’s reluctance to perform a vaginal examination when such an examination is clinically indicated.

TWO CASES OF RETAINED VAGINAL PACKING: WHEN WRITING AN ORDER IS NOT ENOUGH

Two cases describing how insufficient handoffs and lack of collaboration among healthcare providers can lead to retained packing after obstetric and surgical procedures

Case #1 Details

- Patient underwent an open reconstructive urogynecologic procedure; Foley catheter was placed to drain the bladder
- After completion of the procedure, the physician composed a dressing by cutting a vaginal packing sponge (removing the radiopaque marker) and placed this in the vagina
 - 4x4 gauze dressings, Kerlix™ fluff and a peri-pad were placed on the perineum and secured with mesh pants
 - Nurse documented the surgical counts as correct; “vag pack with Premarin® cream by doctor, gauze 4x4’s” was recorded
 - Physician order was to remove the pack the next day when the Foley catheter was removed

Case #1 Details

- Post-op, the patient was transferred to a medical floor instead of the surgical floor
- The next day, the nurse read the physician order to remove the catheter and packing
 - The nurse removed the 4x4s, the Kerlix™ fluff and the peri-pad, assuming this was the extent of the packing
 - Before discharge, the physician briefly checked the patient's perineum and did not see anything
 - The physician asked the patient if “everything” had been removed; she said "yes" and was discharged to home

Case #1 Details

- Ten days post-discharge, the patient presented at follow-up appointment with complaints of vaginal irritation, fullness, and burning with urination
 - The physician diagnosed a urinary tract infection and prescribed antibiotics
 - Subsequently, the patient developed a malodorous vaginal discharge
- Three weeks post-discharge, the patient went to ED with fever and complaining of pelvic fullness and pain when sitting
 - A CT scan showed an amorphous density high in the vagina without evidence of perforation or abscess
 - Consulting gynecologist removed a rust-colored, fetid, retained vaginal pack

Case #2 Details

- Patient underwent an anterior/posterior urogynecologic procedure; Foley catheter was placed to drain the bladder
- After the procedure, the physician placed radiopaque vaginal packing in the vagina and a dressing on the perineum; the physician ordered that the packing be removed the next day with the Foley catheter
 - In the nursing intraoperative record, the Operating Room (OR) nurse documented the surgical counts as correct and that an x-ray detectable pack was in the vagina
 - The OR nurse could not find the Orifice Packing Communication Tool or a colored armband instructing to “remove packing before discharge”; instead, she wrote “vaginal packing” on a slip of paper, which she affixed to the patient’s gurney mattress

Case #2 Details

- At handoff to the post-anesthesia care unit (PACU) nurse, the OR nurse stated that there was packing in the vagina but did not ask for or receive any repeat-back confirmation
- Hours later in the PACU, a different nurse removed the Foley but did not see any vaginal packing and sought help from another nurse
 - The second nurse checked to see if the patient was wearing the colored armband; not seeing one, the nurse assumed there was no packing but did not examine the patient
- Before discharge, the physician asked (using the patient's daughter to translate) whether the Foley and packing had been removed
 - The patient said yes, that "it" had and was then discharged to home

Case #2 Details

- Two days post-discharge, the patient called the hospital's patient safety officer
 - In her native language, the patient said that while she was sitting on the toilet, she felt fullness and burning “down there” and that she saw something dangling out from inside her
 - The patient painfully pulled out a 3-foot-long piece of cotton gauze with a blue line in it
 - She asked the patient safety officer if this was “the Foley” that should have been removed.

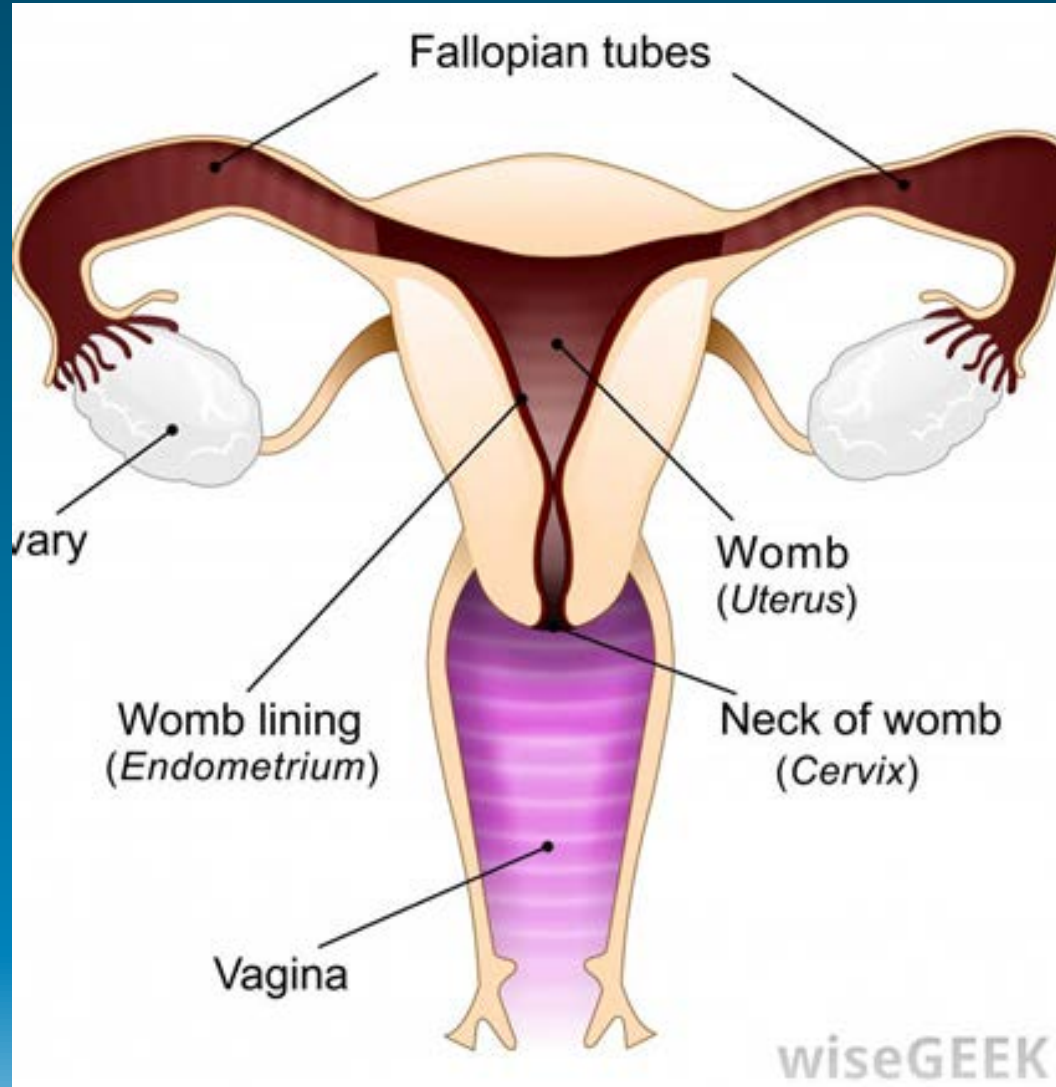
TWO CASES OF RETAINED VAGINAL PACKING: WHEN WRITING AN ORDER IS NOT ENOUGH

THE COMMENTARY

By Verna Gibbs, MD

Background

- Packing = any material (e.g., ribbon or rolled gauze, cotton wadding, lap pads, iodoform gauze) that is forcefully and tightly placed in a cavity, orifice, or wound, usually to control bleeding, aid healing of infection, or limit wound contamination
- Cavity = hollow, contained space with defined borders or margins, which is usually anatomically defined (e.g., the abdominal or thoracic cavity), but may also be pathologic (e.g., dental decay leading to an abscess cavity).
- Orifice = opening to a space through which something can pass; the most often packed orifices are the vagina, mouth, nose, ear, and rectum.



Orifice Packing

Orifice Packing (1)

- Post-procedural vaginal wound care often involves orifice packing
- The material placed in an orifice is a dressing – not a surgical sponge – and thus is not part of the intra-operative surgical count
- Removal usually occurs within 24-48 hours, before discharge from the hospital but after the patient has left the OR and the PACU
- Vaginal packing is an intra-vaginal surgical item that cannot be seen, has no visible evidence of its existence (like a bandage or incision), but must be removed, often by someone other than the person who inserted it, at a remote site and at a distant time.
- **All these circumstances may lead to retained packing without strong communication strategies to ensure safe handoffs.**

Orifice Packing (2)

- Materials available for packing can vary and which kind to use is subject to physicians' judgment and preference – but for the vagina, the safest choice is to insert one continuous, appropriately sized piece of cotton material with a radiopaque marker that runs throughout the gauze
 - Having the radiopaque marker throughout the packing material facilitates x-ray identification, if the original dressing was cut and fashioned to fit the space, and there is a question of retention.
- Once the physician has inserted the vaginal packing, they must write nursing orders for the time of removal or provide instruction for the packing to remain in place at discharge, with plans for removal as an outpatient.

Orifice Packing (3)



- Both dressings have a radiopaque marker; on the left the marker within each type of gauze material runs throughout the dressing, whereas on the right, the marker is just at the end of the sponge. If the end is cut off to make the sponge fit in the vagina, there is no means to detect the presence of the packing by x-ray.

Approach to Improving Patient Safety

Approach to Improving Patient Safety (1)

- Retained vaginal packing results from a concatenation of errors in practice and communication involving multiple care providers in multiple sites; it is a system problem that requires system solutions
- Design of a system to prevent retained vaginal packing can be informed by a sequential active agent perspective
 - This perspective involves defining safe practices and communication strategies for each agent (physicians, nurses, patient) at each site, at different points along the process from packing insertion to removal.
 - Shared knowledge of the whole action plan is required rather than a siloed understanding of an individual actor's role.

Approach to Improving Patient Safety (2)

- The active agents involved in the vaginal packing process include:
 - ***The physician*** who inserts the packing material into the vagina in the OR or procedural area, where the patient is likely sedated or under general anesthesia
 - ***The OR nurse circulator***, who is present at the insertion of the packing and is responsible for intraoperative documentation
 - ***The patient care nurses***, who are frequently asked to remove the packing
 - ***The patient***, who is told once awake and recovered, and at each subsequent handoff in care, that there is packing in her vagina and that the intent is to remove it before discharge (if applicable)
- This process ensures information is transferred from primary sources – those who actually know, saw, or acted – to secondary sources

Approach to Improving Patient Safety (3)

Instructions: The purpose of this tracking tool is to enhance communication among care providers when there is office packing in place to assist in the prevention of retained packing.

Section I: Initial Documentation (location where packing inserted)

Placement of Packing Material

Location of Packing Placement	Site of Office Packing	Packing Material – specify type, size and number	Date/Time
<input type="checkbox"/> Main OR <input type="checkbox"/> Obstetrical OR <input type="checkbox"/> LDR <input type="checkbox"/> Other _____	<input type="checkbox"/> Vagina <input type="checkbox"/> High Nasal Sinus <input type="checkbox"/> Rectum <input type="checkbox"/> Other _____	Type of radiopaque packing: _____ Size: _____ Number of Packing Used: _____	

Placement of cranberry armband on patient

RN Signature _____ Date _____ Time _____

Physician order in place providing instruction on the management of the packing and specifically when it should be removed.

Instructions provided to the patient/family including plan for removal

RN Signature _____ Date _____ Time _____

Section II: Handoff Documentation (occurs at each transition of care while packing in place)

Unit / Shift	Assessment/Status of Packing	Date/Time	Signature of Nurse Receiving Handoff

Section III: Packing Removal

Removal of Dressing/Packing Material

Date / Time of removal	Notes
	<input type="checkbox"/> Packing Removed – must match exactly what was placed – any discrepancy obtain an x-ray <input type="checkbox"/> Packing armband removed

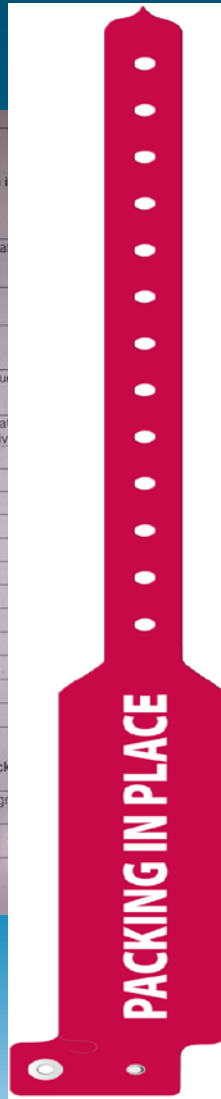
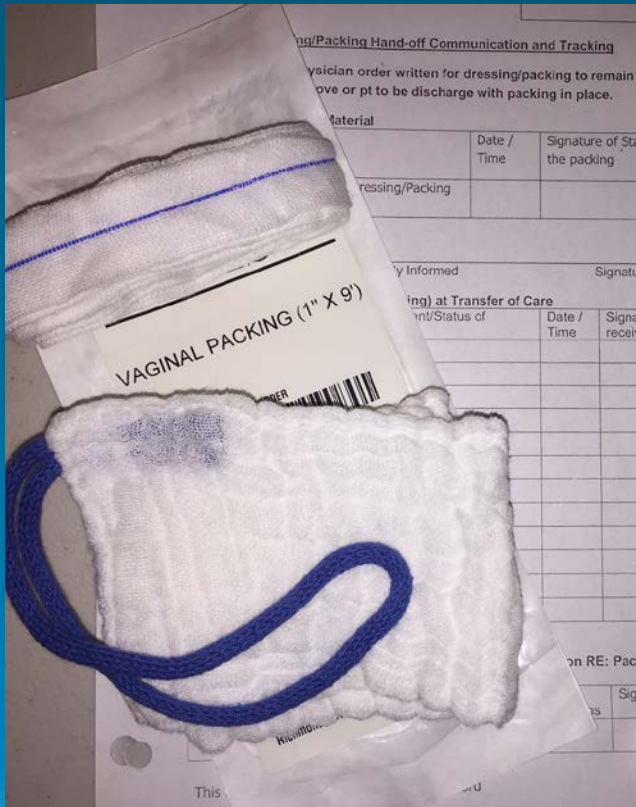
Physician order written to discharge patient with packing in place. Packing and removal instructions provided to patient.

RN Signature _____ Date _____ Time _____

- “Best practice” includes a nurse circulator placing a specifically designed armband on the patient in the OR, when the packing is inserted
- The nurse circulator also completes an electronic or paper “packer tracker tool” specifying the type of packing and placement, as shown
- The armband and tracker facilitate handoffs with active read-back/repeat-back instruction between the nurse circulator and the receiving nurse

Approach to Improving Patient Safety (4)

- This "kit" should be kept together in the OR



- ✓ Paper tracker
- ✓ Packing
- ✓ Armband

- Keep items together so they are easy for the circulating RN to find
- Give packing to MD
- Fill out paper tracker
- Apply armband to patient
- Document in EMR
- Handoff information goes to post-op care RN

Approach to Improving Patient Safety (5)

- The armband serves as a reminder for the patient care nurses to remove the packing or ask why the patient has a colored armband that says “packing in place”
 - When the packing is removed, it can be checked against the tracking tool to confirm that it matches exactly what was documented as having been inserted
 - If there is any discrepancy, a digital vaginal exam or x-ray can verify removal
 - Represents a visible surrogate for the invisible packing

Approach to Improving Patient Safety (6)

- At each handoff and as care progresses, nurses can remind the patient why the armband is there and the plans for the packing
 - Patients may forget, be under the influence of sedating medications, or may not understand the first time they are told something
 - This process also engages patients in their care. For example, a well-informed patient may ask “Am I supposed to go home with this colored armband?” or “They told me I was going to have the packing removed but I feel like there is still something inside me”

Approach to Improving Patient Safety (7)

- While acknowledging the importance of system-oriented solutions, as fully described above, the health professionals involved in caring for these patients could have taken several specific steps that would have prevented patient harm:
 - Called the physician to clarify the written order, explaining (in case #2) that the patient was not wearing an armband to indicate orifice packing
 - Reviewed the intraoperative nursing report to find out what was written by the nurse circulator
 - Called or texted the nurse circulator to confirm the information documented in the medical record
 - Asked the patient (in her native language or through a qualified interpreter) if she felt like there was something in her vagina
 - Performed a digital vaginal examination before discharge or requested the physician to order an x-ray to resolve the issue

Executing none of these options, while “working around” the system-oriented processes that hospital quality improvement professionals had previously implemented, led to an unfortunate outcome for the patient.

Cultural and Social Issues

Cultural and Social Issues (1)

- Lack of collaboration among clinicians
 - One study found that nurses prevented 86% of medical errors before they occurred, suggesting that increasing collaboration among nurses may improve patient safety
 - Nurse-to-nurse collaboration may be compromised by aggressive and abusive behavior

Cultural and Social Issues (2)

- Reluctance to perform digital vaginal exams by all levels of medical personnel
 - Instead, providers rely on perfunctory perineal observation or expensive radiographic studies
 - Digital vaginal exams are not typically taught in nursing school; however, additional training is provided by hospitals for nurses working on obstetric or gynecology units
 - Hospital culture should support nurses to raise scope of practice questions when they are asked to perform procedures (such as removing vaginal packing) for which they have not been trained
 - All EDs and units housing postpartum and postoperative gynecologic patients should be equipped for pelvic examinations so that clinicians do not rely on CT to evaluate patients presenting with vaginal discharge

TAKE HOME POINTS

Take-Home Points (1)

- Packing refers to any material that is forcefully and tightly placed in a cavity, orifice, or wound, usually to control bleeding, aid healing of infection, or limit wound contamination.
- Orifice packing is considered a dressing, so it is not a counted item in the operating room and it is usually intended for removal 24-48 hours after surgery (by a nurse acting under the order of a physician).
- Hospitals must develop systems to prevent retained packing in orifices, especially the vagina.

Take-Home Points (2)

- One such system includes (1) use of packing materials with radiopaque markers that are not able to be cut off; (2) use of one continuous piece of packing; (3) use of an “orifice packing handoff tool” or Packer Tracker to facilitate safe handoff across shifts and units; (4) placement in the operating room of a “packing armband,” which is cut off only after the packing is removed; (5) clear documentation in the medical record that packing has been inserted or removed; and (6) engagement and education of the patient to understand the purpose of the packing and the plan for removal; to help the providers get it right.

Take-Home Points (3)

- Handoff information should include specific details about nature and amount of the vaginal packing, when and where it was inserted, and when and where it should be removed.
- Information flow is best when the information is conveyed from primary sources - those who actually know, saw, or acted in the case – rather than secondary sources.
- Nurses may need additional training to perform digital vaginal exams, particularly if they are on a unit that does not normally care for postpartum or postoperative gynecology patients. The organizational culture should encourage health care providers to communicate and collaborate with each other to optimize patient safety.

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