

Pressure Ulcers eCourse

Module 5.8: Pressure Ulcer Surgery

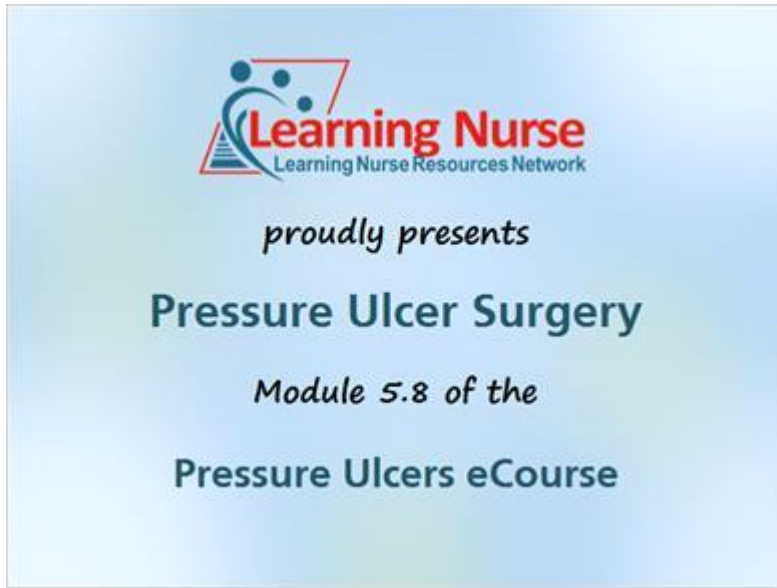
Handout

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Pressure Ulcer Surgery

1. Surgery

1.1 Section Title



Narration

No narration, only music.

1.2 Topics



Narration

JILL: Hi ... I'm Jill and with me is Mark. Welcome to Module 5.8 of this Pressure Ulcers course. This last module is about the use of surgery in treating pressure ulcers.

MARK: Hi Jill. I am guessing that surgery is probably the last option that we resort to when all else fails.

JILL: Yes, that is correct. We have already mentioned the many interventions that we can do to help heal pressure ulcers. But, sometimes, the best way to deal with them is on the operating table.

MARK: So what are we going to cover in this presentation? We are not doing the surgery.

JILL: No, we're not. But we are the ones that have to prepare the patients for surgery; assist in the OR; and look after them postoperatively. That is what we will discuss in this module.

1.3 Preoperatively

Preoperatively

Identify patients for surgical intervention:

- *conservative treatments unsuccessful*
- *more rapid closure*



Narration

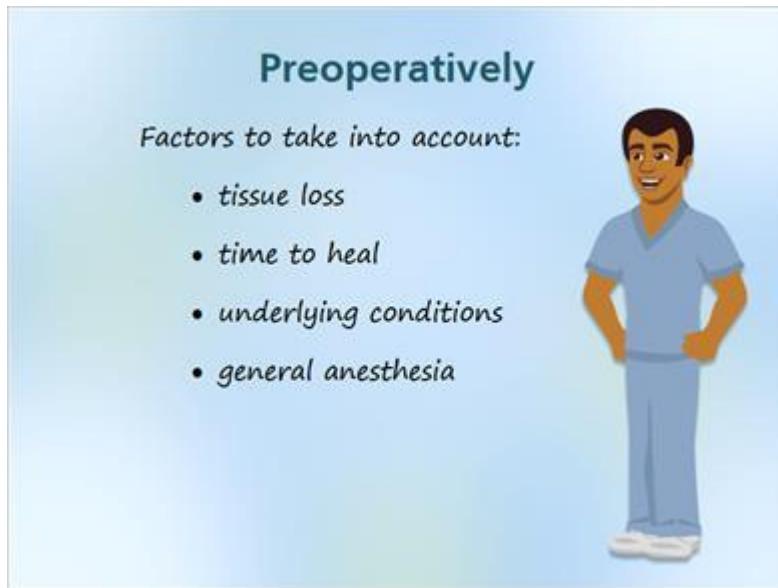
JILL: The first step is to identify suitable patients for surgical intervention.

MARK: What criteria should we be using to select these candidates?

JILL: One is that the appropriate conservative treatments have been unsuccessful in the ulcer healing itself. A second reason is that the patient requires a more rapid closure due to the size of the wound, or the patient's lifestyle.

MARK: Okay, I see.

1.4 Preoperatively 2



Narration

JILL: Surgery must be looked at from a clinical standpoint. A patient must have a preoperative risk assessment to determine if they can physically undergo a prolonged surgical procedure. Surgical interventions may take up to 3 hours and result in blood loss requiring transfusions. Factors to take into account are the expected amount of tissue loss, and the time it will take the wound to heal.

In addition, we need to ensure that the patient's underlying conditions, such as nutritional status, is adequate to promote healing and prevent infection.

Finally, general anesthesia will be required to control hyperreflexia and autonomic dysfunction. The patient needs to be prone for the operation.

MARK: Hmmm. There are risks, especially for the elderly, in undergoing surgery. I guess we have to be very careful in assessing these risks prior to proceeding with any surgical interventions.

JILL: Yes, that's right.

1.5 Preoperatively 3



Narration

JILL: There are a few other things we need to do prior to surgery. One is to confirm any end-of-life preferences.

MARK: This is now fairly standard procedure for any type of surgery, isn't it?

JILL: Yes, it is. We should also obtain a surgical consultation regarding drainage or debridement of the wound prior to surgery. We need to do the same if there is a risk that the pressure ulcer is a source of sepsis.

MARK: Taking these precautions seems reasonable.

1.6 Preoperatively 4

Preoperatively

Optimize physical factors for wound healing:

- *nutrition*
- *blood glucose*
- *diarrhea*
- *spasms*
- *nicotine*
- *chemotherapy / immunosuppressives*
- *specialty mattress*



Alternating pressure mattress

The image shows a hospital bed with a multi-colored (green, red, blue) alternating pressure mattress. A small blue question mark icon is positioned above the bed.

Narration

JILL: Another thing we need to do prior to surgery is try to optimize as many physical factors as possible that might impair surgical wound healing. What are these factors, Mark?

MARK: To start with, I would think that the nutritional status of the patient must be adequate. Other factors that need to be under control are blood glucose levels, diarrhea, muscle spasms and nicotine use. We may need to alter or reduce chemotherapy or immunosuppressive medications. Finally, we should check to see whether an appropriate specialty mattress is available for postoperative care.

JILL: Yes, these are all important factors.

1.7 Preoperatively 5

Preoperatively

Optimize psychosocial factors

Assess for osteomyelitis

Resect infected bone



Narration

JILL: There are several other things we need to do as well. First, we need to try and optimize any psychosocial factors that might impair surgical wound healing.

MARK: And we need to assess for osteomyelitis and resect infected bone if present prior to surgical closure.

JILL: Yes, that's right.

1.8 Intraoperatively

Intraoperatively

Position patient

Pressure points and airway

Excise ulcer



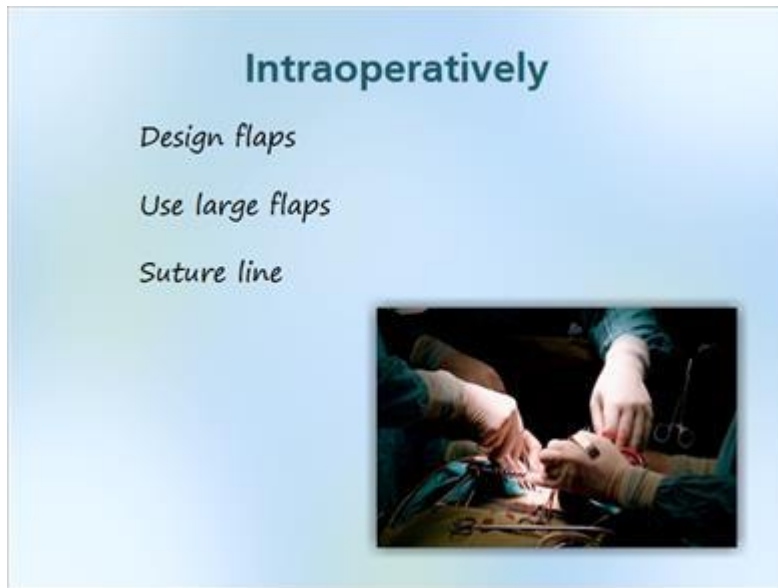
Narration

JILL: After all the preoperative steps have been completed, the patient is scheduled for pressure ulcer surgery. Mark, do you want to take us through what happens in the OR?

MARK: The patient is positioned on the surgical table. Most patients will be in the prone position. Therefore, careful attention has to be paid to pressure points and the airway. Appropriate support on bony prominences is important during surgical procedures.

Once the patient is properly positioned, the surgeon will excise the ulcer and all the affected tissue. It is important to remove all of the necrotic tissue in the wound bed.

1.9 Intraoperatively 2



Narration

MARK: The next step is to design the flaps with composite tissue to improve durability. Flaps should be arterialized to restore form, function and blood supply of the missing tissue. It may also be helpful to treat any residual infection before replacing the physical barrier.

The flap should be as large as possible and be appropriate for the location and size of the pressure ulcer. A durable surgical technique will provide padding and protect underlying structure. Finally, the suture line should be placed away from any area of direct pressure.

JILL: Thanks for that overview. Fortunately for us, this treatment is done by competent surgeons who know what they are doing.

1.10 Postoperatively



Narration

JILL: The surgery has been successfully completed. Let's now examine some of the postoperative procedures we have to implement to ensure the surgical wound heals.

The first step is to transfer the individual from the operating table onto the bed with adequate help to avoid disruption of the flap. Blood flow to the flap is provided through the pedicle feeding the flap. This flap can be injured by shear forces and pressure.

The patient should be placed on a pressure redistribution bed immediately following surgery. Ideally, the bed should be present in the operating room. The patient should be transferred directly to this bed and sent to the acute care unit on it. The patient should be kept on the intensive pressure-redistribution system. Why is that, Mark?

MARK: As we learned in our module on support surfaces, the pressure redistribution will reduce shear and pressure on the operative site; will limit tension on the incision; and, will control the microclimate around the wound.

JILL: One more final important point. You should NEVER elevate the head of the bed or move the bed without approval of the surgeon.

1.11 Postoperatively 2



Narration

JILL: Continuing on with postoperative care of our patient. We need to protect the blood supply to the flap from pressure and pulling. We need to protect it from friction and shear. We do NOT use bedpans with pelvic flaps.

MARK: Good points to remember. Anything else?

1.12 Postoperatively 3

Postoperatively

Report signs of flap failure:

- arterial - mottling or pallor
- venous - swollen or purple black tissue
- suture line dehiscence



Narration

JILL: Yes. We need to report any signs of flap failure to the surgeon immediately.

MARK: And what are these signs?

JILL: For arterial flaps, the signs will be mottling or pallor. For venous flaps, we need to be alert for swollen or purple black tissue. The most common complication is suture line dehiscence.

MARK: Got it. If we see any of these, we contact the surgeon!

1.13 Postoperatively 4

Postoperatively

Monitor wound drainage



Drainage tubes are not kinked or clogged:

- *prevent seroma or hematoma*
- *minimize risk of infection*
- *facilitate flap adherence*

Narration

JILL: We also need to monitor wound drainage. We have to check to make sure that the drainage tubes are not kinked or clogged. Proper drainage is important to prevent seroma or hematoma; to minimize risk of infection; and to facilitate flap adherence.

1.14 Postoperatively 5

Postoperatively

Prevent risks associated with immobility:

- *pulmonary hygiene*
- *prevent blood stasis*
- *turn and reposition*
- *inspect skin*
- *limit flexion to hips*

A photograph showing a healthcare professional in a white uniform assisting an elderly patient sitting up in a hospital bed. The patient is wearing a grey t-shirt and brown shorts. The professional is leaning over the patient, possibly checking their posture or providing support.

Narration

JILL: Since patients are immobile after surgery, we need watch for related hazards. Mark, care to do this one?

MARK: Sure. We need to take steps to prevent risks associated with immobility. These include: ensuring pulmonary hygiene; preventing blood stasis; turning and repositioning; regularly inspecting the skin; and limiting flexion of the hips until the surgeon approves.

JILL: Great.

1.15 Postoperatively 6

Postoperatively

Turn patient

Progressive sitting

Pressure-redistributing chair cushion

Dress appropriately:

- hospital gown
- no zippers, buttons, or snaps

A photograph of an elderly male patient sitting in a wheelchair. He is wearing a white hospital gown and white socks. The wheelchair is a standard manual wheelchair with a blue frame. The background is plain white.

Narration

JILL: Here are a few other things that we need to do. We need to turn the patient with a turning sheet to prevent any new pressure ulcers from developing. We should initiate a program of progressive sitting, according to the surgeon's orders. When we are getting our patient to sit, we need to make sure they sit on a pressure-redistributing chair cushion.

We also need to dress the patient in appropriate clothing to prevent injury to the flap when we are using a slide board. This usually means a hospital gown and NO zippers, buttons or snaps near the surgical site.

MARK: Those are all good points.

1.16 Postoperatively 7

Postoperatively

Positive social network

- *positive lifestyle*
- *depression management*

Supportive equipment

Family involvement

Community resources



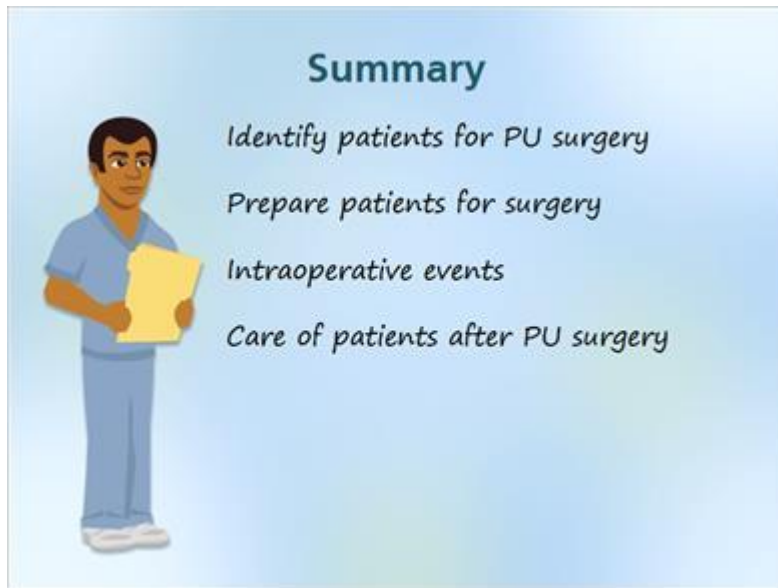
Narration

MARK: Let me do this last slide. We need to confirm the presence of a positive social network at home prior to discharging the patient. This means a positive lifestyle with little or no depression.

Related to this, we have to confirm that the patient will be able to get and maintain the supportive equipment she needs. Also that she will be able to adhere to the postoperative needs after surgery. Family help and involvement can greatly improve the chances of a successful recovery.

JILL: Very good Mark. The only other thing I would add is that there are community resources such as home care that can be very helpful to patients recovering from surgery. We need to make sure that we make our patients, and their families, are aware of these resources before they are discharged.

1.17 Summary



Narration

JILL: That brings us to the end of this Module 5.8 on pressure ulcer surgery. Mark, one last time?

MARK: Okay! We started the presentation by looking at the factors and risks associated with selecting patients for pressure ulcer surgery. We then discussed the steps we need to take to prepare these patients for their surgery. We very briefly explained what happens in the operating room. And finally, we described the things that we need to do to assist the patient to fully recover, both in our care, and at home.

JILL: Good job as usual. Before we say goodbye, I like to say how much I enjoyed doing this pressure ulcer course with you Mark. I hope we can work together again soon.

MARK: Yes, Jill. I loved working on this course with you. I really learned a lot. I also appreciate your tolerance and patience in putting up with me. (laughs). Goodbye for now.

JILL: Goodbye.

1.18 The End



Narration

No narration, only music.