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Review Article

A review on caring of surgical wound after surgical procedure

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ABSTRACT

Inadequate wound healing and scar formation continues to be major issues in day-to-day surgical practice. A wound infection (like pus formation, smelly discharge, and the incision line's opening etc.) is one of them complications of surgical procedure. An infection may appear in surgical wound due to lack of care in post-operatively like dressing not being changed after regular interval, not following aseptic protocol during the dressing, and the dressing material not properly sterilized. Hence, the aim of proper care in post-operative practice was to reduce the risk of infection in surgical wound and promote healing. One of the most important aspects of post-operative wound care is prompt wound evaluation, appropriate hand washing, adhering to aseptic protocol when dressing, using sterile dressing material each time, and proper cleaning of the wound, as well as the prompt identification and management of wound complications.

Keywords: Surgical wound, Dressing of surgical wound, Infection control

INTRODUCTION

Almost all of the surgeon's work is done. Patients are now responsible for taking care of surgical wounds. Patients can ensure that the incision heals properly and does not become infected by taking good care of it.

A surgical wound usually recovers in two weeks or less. If the patient is taking certain medications, such as antibiotics or supporting drugs, or has a medical condition, it can take longer. The patient will be taking care of incision, cleaning and changing dressing after regular interval.

The patients may take care of a surgical incision with guide. Be careful to speak with your surgeon or another member of your medical team if you have any questions about how to care for your wound.

What kinds of surgical wounds are there?

Four categories can be used to group surgical wound. These classifications are based on the degree of contamination or cleanliness, the risk of infection, and the location of the wound on the body.[1]

Category 1: These wounds are regarded as clean wounds. They do not exhibit any signs of inflammation or infection.

Category 2: They are considered clean-contaminated wounds. Even though the wound may not be showing any signs of infection, its position makes it more likely to do so. For instance, there may be a significant risk of infection following surgery on the gastro-intestinal tract (colostomy and ileostomy).

Category 3: A surgical wound that has had contact with an outside object is regarded as contaminated and is at a

high risk of becoming infected. For instance, a gunshot wound could contaminate the skin in close proximity of the surgical repair.

Category 4: This type of wound is thought to be dirty-contaminated. Among these are wounds that have come into contact with feces.

How are incision stitched up and removed?

To close a surgical incision, surgeons employ a variety of approaches. You might have surgical glue, staples or stitches. Your surgeon will remove any staples you may have after the incision has healed. Within 5 to 10 days, surgical adhesive normally dissolves naturally. If you had stitches, the surgeon will either remove them or they will disintegrate over time. Small strips of tape may hold the wound together if they dissolve. They may fall off in 1 to 2 weeks or the surgeon will remove them later.[2] Although stitches could take a few weeks for them to totally vanish, the majority of types often dissolve of fall out between 7 to 10 days. Depending on the operation site, removal of clips or non-dispersible sutures may take 5 to 14 days.[9]

How do I take care of surgical incision?

When it comes to post-surgery incision care, it is crucial to adhere to your doctor's instructions. Following the care instructions for surgical incision promotes healing, decreases scarring, and minimizes chance of infection.

Here are a few general pointers for caring for incisions: always sanitize your hands before and after touching the incisions site; every day, check your incision and wounds for symptoms that your doctor has warned you are troubling or red flags; check for any bleeding. Apply direct, continuous pressure to the incisions if they begin to bleed, call your healthcare practitioner for instructions if you suffer any bleeding; stay away from wearing tight clothing that could rub against your incisions; do not itch any open wounds. If possible. It's natural for your incisions to itch as they heal. Avoid rubbing them. Call your doctor if the itching worsens rather than subside.

A list of material required to change the dressing[3]

(a) An un-obstructed area for work. The area need to be large enough for the dressing pack to open; (b) sterile dressing or procedure kit; (c) hand wash or alcohol based sanitizer for cleaning the hand; (d) non-sterile gloves for remove the previous dressing; (e) sterile gloves for applying new dressing; (f) plastic apron; (g) dressing material (like gauze pads, cotton, gauze piece etc.); (h) micro-more tape (surgical tape); (i) suitable cleansing solution for the wound (like povidone iodine, hydrogen per oxide etc.) if needed; (j) medical Drape;[10] (k) rash/Plastic bag (for getting rid of old tape, dressing, etc.)[11]

Steps to follow for changing a dressing

The process of changing the incision dressing involves numerous phases. We are following all the steps carefully.

Proper hand washing

Before changing the dressing, it is important to wash your hands properly. Use an alcohol based hand sanitizer or follows these steps to wash your hands.[4]

Check for any cuts or scrapes on the hand's skin.[12] Remove all jewellery form your hands (like hand watch, finger ring, bracelet). Pointing your hands downward under running tap water, saturate them. Use soap and wash your hand for 15-30 second. Make sure to clean the area surrounding your nails as well. Clearly rinse. Apply a fresh towel to dry.

Taking off the previous dressing

The frequency of dressing changes will be advised by your health care practitioner, when getting ready, do the following.[4] After clean the hands. Ensure you have all the necessary supplies on hand. The work surface is organized. Gently remove the tape form the skin. Grab the old dressing and remove it using a fresh medical glove (non-sterile). The old dressing should be placed in a plastic bag and left aside. You should wash your hands once more after removing the previous dressing.

Cleaning of the wound

To clean the skin around the wound, you can use a gauze pad or soaked cotton.[4]

Use mild soapy water or regular saline solution (salt water). Gently dab or clean the skin with gauze or cotton pad after soaking it in saline solution or soapy water. Make an effort to clean the skin of any drainage, dried blood, or other debris that may have accumulated there. Use caution while using antibacterial chemical, alcohol, hydrogen per oxide, iodine or skin cleaners. They might impede healing by harming the wound's tissue.

The health care provider could also instruct you to wash or irrigate the wound.[4]

Fill a normal saline in syringe with savlon, H_2O_2, povidone iodine or whatever your health care provider advises. 1 to 6 inch (2.5 to 15 cm) away from the wound, hold the syringe. Enough hare should be sprayed into the wound to remove any drainage and discharge. Dry the wound with a clean, soft, dry gauze piece or cotton pad.

If your health care provider has not given the all-clear, avoid applying lotion, cream, or herbal medicines to the wound or the area around it.

Putting on the fresh attire (dressing)

How to use a dressing with a bandage attached[5]

Before touching a dressing or wound, wash your hands and wear sterile gloves. The dressing pad should be unfolded and placed directly on top of the wound. Hold the bandage on either side of the dressing pad to keep it in place. Make sure the bandage extends past the edge of the wound. To secure the dressing pad, wrap the bandage's short end around the damaged area that has been injured. Make sure the entire dressing pad is covered by wrapping the longer end around the damaged area. Keep the short end exposed. To keep pressure on the wound, tie the bandage by joining the short and long ends in a reef knot over the top of the pad. After that, check their circulation. To accomplish this, apply pressure to the wound for five second with a nail or piece of skin until it turns pale. It the colour does not return after two seconds the bandage is excessively tight and need to be loosened. Remove the dressing if blood seeps through it and apply pressure again with a fresh dressing or pad to stop the bleeding. Once the bleeding is under control, wrap the area and tie a knot over the cut to apply pressure.

How to use sterilized gauze or pads[5]

Before touching a bandage or wound, wash hands and put on disposable gloves. Make sure the pad extends over the wound's edge. Place the pad on top of the wound while holding it by its edges. Never touch the pad or gauze area that will come in contact with the wound. Use a roller bandage or adhesive tape to a fix the pad. Never completely encircle an injured area with tape because this may limit blood flow. Never reuse a dressing, do not use it again.[4] At last wash your hand, after completing the dressing procedure.

How to reduce risk of wound infection?

There are numerous actions you can take to decrease the risk of infection.[2]

Always wash your hands before touching the incisions and thereafter. Use the sterile glove at dressing time. Take proper nutrient diet, it helps in healing of wounds. Observe the prescription-related instructions provided by your health care practitioner. Observe the directions for changing the dress. Avoid pulling at the tape, tissue glue, or stitches, or removing the tape strips. The incision is dry at all times. Keep bodily fluids such as feces and urine away from wound.[6] Keep animal hair, urine, and excrement away from the wound.[6]

Warning signs of wound infections

In order to properly care for an incision, you must be aware of the warning indications of infection. Surgical site infection (SSI) is a constant risk of surgery. Continue to monitor any potential infection signs for prompt treatment in the event that you discover a potential infection.

Indication of a potential infection consist of an opaque wound with a viscous, smelly discharge. This is typically coloured white or cream.[16] A foul smell coming from the incision. The incision line's opening- it becomes broader, longer, or deeper. Warmth and hardness surrounding the incision site. Beyond the basic boundaries of the incision site, redness should not worsen but rather improve. Fever (over 38.4 ºC or 101 ºF), chills or sweating. Fluctuations in the blood sugar levels of diabetics. Broad risk factors for infection development.

Predisposing factors to infection include:[7] medical risk; prior health history (diabetes, thyroid, chemotherapy, etc.); family history; current medical intervention (A recent emergency operation or an extended surgical treatment); societal risk; life style; history of traveling; occupation; weakened immunity (for instance, an old person or someone undergoing chemotherapy);[2] a prior smoking history; surplus weight; malnutrition; cancer;[13] old age, paralysis or other forms of restricted movement;[15] restoration and future prospects.

What activities are prohibited while a wound is healing?

Being active promotes blood flow, which enhances recovery. Your surgeon might advise against lifting, tugging, straining, exercising, or participating in sports for a month following some type of surgery. By following these guidelines, the incision line will not open and recovery will be aided.[2]

What is the duration required for an incision to heal?

Incision healing and the prevention of infection can both be enhanced by proper incision care. A surgical incision typically heals in two weeks. Healing from a more intricate surgical incision will take longer. Healing time may vary if you are taking certain medications or have other medical issues.[2]

When should I call a health care provider?

If you have any symptoms, contact the health care provider, like bleeding that is not controlled by pressure, pus or drainage, bad smell, fever, redness, pain or if an infection is suspected.[14]

DISCUSSION

One of the most important aspects of post-operative wound care is prompt wound evaluation, appropriate hand washing, adhering to aseptic protocol when dressing, using sterile dressing material each time, and proper cleaning of the wound, as well as the prompt identification and management of wound complications.[8] The patients should be take proper nutrient diet, it help in

healing of wound and patients should be avoid lifting, tugging, straining, exercising, or participating in sports for a month for further direction.[2] The patients should be avoiding smoking, chewing tobacco and alcohol abuses because these are obstruct in healing to wound and promote the chances of infection.[8]

CONCLUSION

An essential component of post-operative recovery is the optimal management of surgical wounds, and medical personnel should keep a focus on the acute wound healing process, minimize the risk of wound complications and provide proper care when they do. One of the most important aspects of post-operative wound care is prompt wound evaluation, appropriate hand washing, adhering to aseptic protocol when dressing, using sterile dressing material each time, and proper cleaning of the wound, as well as the prompt identification and management of wound complications.

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