Wound Closure Tips

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Dermatologic surgery commonly involves wound closure. The goal is to find the repair option that best fits the patient's expectations and lifestyle. The pearls provided herein provide guidance on options for wound closure, information to disseminate to patients, wound care instructions, and managing patients' expectations.

What does your patient need to know preoperatively?

Patients should be educated on all aspects of the procedure as well as the expected postoperative course of healing. Manage patient expectations in advance to minimize any surprises for everyone involved. Swelling and bruising are not uncommon in the immediate postoperative phase, and for surgery near the eyes, both may be worse, making it prudent for patients to schedule any procedures after big events or vacations.

The sutured wound initially can appear lumpy, bumpy, and pink, and it may take potentially 3 to 6 months, or even longer, for the scar to fully mature depending on the type of repair performed. Sutured wounds require activity restrictions, which is especially important for young active patients as well as patients who may have labor-intensive occupations. I often recommend 1 to 2 weeks before resuming most forms of strenuous exercise and/or physical labor. Skin grafts may require even longer limitations. Although the overall risk for infection is low (approximately 1%), patients should be instructed to monitor for purulent drainage, fever, and worsening pain and redness, and to inform the dermatologist immediately of any concerning symptoms.

What is your go-to approach for wound closure?

My motto is: Simplest is often best. For the patient who prioritizes returning to full activity as soon as possible, the wound may be able to heal by secondary intention in select anatomic locations, and this approach can often yield excellent cosmetic results. If wound closure with sutures is indicated, then I use the following treatment algorithm:

1. Primary closure is used if I can close a wound in a linear fashion without distorting free margins, especially if I can hide the lines within cosmetic subunit junctions and/or relaxed skin tension lines.

2. Local flap is used for defects when repair in a linear fashion is not always ideal for various reasons. Recruit local skin with various flap options for the best color and texture match. This approach may be more involved but often provides the best long-term cosmetic outcome; however, it usually results in a longer recovery time and may even require staged procedures.

3. Graft usually is our last preferred option because it may appear as a sewn-in patch; however, in certain anatomic locations and in the right patient, skin grafts also can yield acceptable cosmetic results.

I give trainees the following surgical technique pearls:

- Use buried vertical mattress sutures to achieve eversion of wound edges with deep sutures
- Dermal pulley as well as epidermal pulley sutures can offset tension wonderfully, especially in high-tension areas such as the back and scalp
- Placement of a running subcuticular suture in place of epidermal stitches on the trunk and extremities can prevent track marks

How do you keep patients compliant with wound care instructions?

Two keys to high patient compliance with wound care are making instructions as simple as possible and providing detailed written instructions. We instruct patients to keep the pressure dressing in place for 48 hours. Once removed, we recommend patients clean the wound with regular soap and water daily, followed by application of petrolatum ointment. For hard-to-reach areas or on non–hair-bearing skin, my surgical assistants apply adhesive strips over the sutures, eliminating the need for daily wound care. For full-thickness skin grafts, we commonly place a bolster pressure dressing that stays in place until the patient returns to our clinic for a postoperative visit. We provide every patient with detailed written instructions as a patient handout that is specific to the type of wound closure performed.

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What do you do if the patient refuses your recommendation for wound closure?

It is important to explain all wound closure options to the patient and the risks and benefits of each. I always show patients the proposed plan using a mirror and/or textbook images so that they can better understand the process. In rare cases when the patient refuses the preferred method of closure, we ensure that he/she understands the advantages and disadvantages of the proposed procedure and why the recommendation was made. If the patient still refuses, we document our lengthy discussion in the medical record. For patients who refuse our recommended plan of sutures and opt to heal by secondary intention, we will see these patients almost weekly to ensure appropriate healing as well as provide further recommendations such as a delayed repair if there is any evidence of functional impairment and/or notable cosmetic implications. A patient completely refusing a planned repair is rare.

More commonly, patients request a "simpler" repair, even if the cosmetic outcome may be suboptimal. For example, some elderly patients with large nasal defects do not want to undergo a staged flap, even though it would give a superior cosmetic result. Instead, we do the best we can with a skin graft or single-stage flap.

What resources do you provide to patients for wound care instructions?

We recommend that physicians prepare comprehensive handouts on wound care instructions that address both short-term and long-term expectations, provide instructions regarding follow-up, and encourage good sun protection behaviors. Some physicians post videos demonstrating proper wound care on their websites, which may be another useful tool.

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SUGGESTED READINGS

Miller CJ, Antunes MB, Sobanko JF. Surgical technique for optimal outcomes: part I. cutting tissue: incising, excising, and undermining. *J Am Acad Dermatol.* 2015;72:377-387.

Miller CJ, Antunes MB, Sobanko JF. Surgical technique for optimal outcomes: part II. repairing tissue: suturing. *J Am Acad Dermatol.* 2015; 72:389-402.