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Surgical complications, part 2: Long-term complications of cutaneous surgery

By Rachit Gupta, MD, and Kelly Park, MD, MSL, FAAD



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Complication and timing	Clinical appearance	Description	Treatment and/or resolution	Prevention
Excessive granulation tissue Few weeks	Red, smooth, slightly shiny, friable plaque overlying the wound extending higher than surrounding wound edges	Risk factors include healing by secondary intention, occlusive dressing, oral retinoid use	- Stop occlusive dressing when granulation tissue appears adequate - Silver nitrate sticks - Topical or intralesional corticosteroids	- Reduce friction - Avoid occlusive dressings if unnecessary - Applying a pressure bandage may help
Pincushion or trapdoor deformity Few weeks	Bulky or outwardly bulging deformity	Highest risk is with bilobed and nasolabial transposition flaps	- Intralesional corticosteroids - Thinning of flap or surgical revision	Appropriate wide undermining
Ectropion Few weeks	Outward drooping of the lower eyelid	- Can occur after procedures on the cheek or near the lower eyelid, due to downward tension - Delayed return to original position on the snap test is a risk factor	Surgical correction	Placement of suspension (Frost) suture and tacking sutures
Eyebrow elevation Few weeks - months	Elevation of one eyebrow compared to the other at rest	Not likely to improve over time spontaneously	Options include surgical correction or neurotoxin	Be cautious when operating on the temple or forehead, and avoid closure types that would raise eyebrow >3mm
Track-mark sutures Few weeks - months	Railroad track-like appearance of the healed surgical wound	Risk factors include if sutures are removed late or tied too tightly	Scar massage, scar revision surgery, dermabrasion may help somewhat improve appearance	- Remove sutures at an appropriate time (5-7 days for the face, and 10-14 days for the torso or extremities) - Use subcuticular running suture if possible
Spitting suture 1-3 months	Sutures protrude from wound	Increased risk from polyglactin 910 suture or if sutures are tied too superficially	Self-resolving, but sutures should be removed if possible	Place sutures with proper depth and consider using alternative suture type
Suture granuloma 1-3 months	Firm, immobile erythema or swelling in the area of prior suturing	Increased risk from polyglactin 910 suture	Self-resolving, but intralesional steroids can help improve symptoms	Consider use of alternative suture type
Telangiectasia 2-3 months	Telangiectasias appear in the area of the procedure	Certain patients may demonstrate exaggerated angiogenesis for unknown reasons	PDL (pulsed-dye laser)	
Hypertrophic scars and keloid Few months to a year	Raised, firm, thick scars that are confined to the original wound (hypertrophic scar) or extend beyond (keloid)	- Highest risk areas include anterior neck, chest, and jawline - Intervening early generally is the most effective	Intralesional corticosteroids, radiation, 5-fluorouracil	- Evaluate for personal or family history of keloids - If at high risk, can treat wound with intralesional corticosteroids pre-emptively

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Webbed, spread, or contracted scars Few months to a year	Scars with significant webbed, spread, or contracted appearance	Can result in significant aesthetic or functional impairment	Scar revision with Z-plasty	Proper surgical planning and preoperative evaluation
Pigmentary change Few months to a year	Hypo- or hyperpigmentation of the scar, or any graft/donor sites	Deep injury often causes hypopigmentation, whereas more superficial injury tends to cause hyperpigmentation	- Strict photoprotection for a year - 308-nm excimer laser treatment or make-up for hypopigmentation - Hydroquinone and/or corticosteroids for hyperpigmentation	Avoid doing procedures with high risk of pigmentary changes during months with strong sun exposure

References:

1. Bologna JL, Schaffer JV, Cerroni L, eds. *Dermatology*. 4th ed. Elsevier, Inc.; 2017.
2. Alikhan A, Hocker TLH, eds. *Review of Dermatology*. 1st ed. Elsevier, Inc.; 2017.
3. James WD, Elston DM, Treat JR, Rosenbach MA, Neuhaus IM. *Andrews' Diseases of the Skin: Clinical Dermatology*. 13th ed. Elsevier, Inc.; 2019.
4. Roenigk RK, Ratz JL, Roenigk HH. *Roenigk's Dermatologic Surgery: Current Techniques in Procedural Dermatology*. 3rd ed. Informa Healthcare; 2007.
5. Robinson JK, ed. *Surgery of the Skin: Procedural Dermatology*. 3rd ed. Saunders Elsevier; 2015.
6. Hale E, Karen J, Robins P. *Handbook of Dermatologic Surgery*. Springer; 2014.
7. Amin SD, Homan KB, Assar M, Lee M, Housewright CD. Hyfreaction and Interference With Implantable Cardiac Devices. *Dermatologic Surgery*. 2020;46(5):612. doi:10.1097/DSS.0000000000002122