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REFERENCES

1. Kaushik SB, Lebwohl MG. CME part II psoriasis: which therapy for which patient: focus on special populations and chronic infections. *J Am Acad Dermatol*. 2019;80(1):43-53.
2. Langley RG, Kimball AB, Nakagawa H, et al. Long-term safety profile of ixekizumab in patients with moderate-to-severe plaque psoriasis: an integrated analysis from 11 clinical trials. *J Eur Acad Dermatol Venereol*. 2019;33(2):333-339.
3. Mease P, Roussou E, Burmester GR, et al. Safety of ixekizumab in patients with psoriatic arthritis: results from a pooled analysis of three clinical trials. *Arthritis Care Res (Hoboken)*. 2019;71(3):367-378.
4. Gottlieb A, Papp P, Xu W, et al. Long-term safety of ixekizumab with over 18000 patient years of exposure: analysis from 12 moderate-to-severe plaque psoriasis studies and 3 psoriatic arthritis studies. Presented at the American Academy of Dermatology (AAD); Washington, DC, USA; March 1-5, 2019; #P10158.
5. Romiti R, Valenzuela F, Chouela EN, et al. Prevalence and outcome of latent tuberculosis in patients receiving ixekizumab: integrated safety analysis from 11 clinical trials of patients with plaque psoriasis. *Br J Dermatol*. 2019;181(1):202-203.

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Table I. Demographics and surgery information

Characteristics of study population	n	%
Sex		
Male	37	74
Female	13	26
Age, y		
Mean	70.6	
Standard deviation	10.0	
Median	70.0	
Race		
White	49	98
American Indian/Alaska Native	1	2
Surgery location		
Cheeks	14	28
Forehead	12	24
Neck	9	18
Preauricular	5	10
Temple	3	6
Eyelid	3	6
Posterior auricular	2	4
Chin	1	2
Nose	1	2
Surgeon code		
Surgeon	24	48
Fellow	19	38
Resident	7	14
Indication for surgery		
Mohs	45	90
Excision	5	10
Mean wound closure length, cm	5.7	

Wound eversion versus planar closure for wounds on the face or neck: A randomized split-wound comparative effectiveness trial

To the Editor: Minimization of postsurgical skin defects remains a challenging aspect of reconstruction after Mohs micrographic surgery.[1] Although some experts advocate for the necessity of wound eversion for ideal scar formation,[2-4] a 2015 study conducted at our institution showed that wound eversion was not associated with better cosmetic outcomes when compared to planar closure.[5] It has been suggested that certain body regions are disproportionally responsive to the effects of eversion.[3] In this follow-up investigation of our original study, we sought to establish whether wound edge eversion improves the cosmetic outcome of operative wounds closed exclusively on the head or the neck.

In this prospective, randomized, split-scar and evaluator-blinded comparison trial, we evaluated the effects of wound eversion on scar formation of postoperative closures on the head and neck. Enrollment and follow-up were completed between October 2015 and July 2017 at the University of California, Davis dermatology clinic. Study design and statistical methods and analysis were largely held consistent with our previous article.[5] Fifty patients were enrolled; per our a priori analysis, 43 patients were required to achieve a power of 90% in detecting a 3-point difference in the 60-point Patient Observer Scar Assessment Scale (POSAS, version 2.0) scale.

Before study commencement, a training session was held for all surgeons to standardize planar and everting closure techniques. Each patient simultaneously received both everted and planar interventions in a split-scar format, achieving wound eversion through buried vertical mattress sutures and simple running cuticular sutures. Comparisons of POSAS scores, scar width, scar elevations, and mean total complications were performed at the 3-month follow-up visit. Data were analyzed using a paired *t* test for parametric data. Categorical data were examined using the Wilcoxon signed rank test for nonparametric data.

A total of 46 patients completed a 3-month postinterventional follow-up visit (Table I). At 3 months, clinician- and patient-determined POSAS and overall

Table II. Blinded observer and patient POSAS results at 3-month follow-up

Components at 3 months	Everted	Planar	*P* value*
Observer, mean (SD)			
Vascularity	2.0 (1.1)	2.2 (0.9)	
Pigmentation	1.6 (0.8)	1.8 (0.8)	
Thickness	1.9 (1.0)	2.0 (1.0)	
Relief	2.0 (1.1)	2.2 (1.0)	
Pliability	2.0 (1.1)	1.8 (0.8)	
Surface area	2.2 (1.1)	2.2 (0.8)	
Sum of POSAS	11.8 (5.0)	12.1 (3.9)	.65
Overall opinion	2.3 (1.1)	2.4 (0.9)	.55
Patient, mean (SD)			
Pain	0.1 (0.5)	0.0 (0.0)	
Itching	0.1 (0.4)	0.1 (0.5)	
Color	2.2 (1.4)	2.4 (2.0)	
Thickness	2.3 (2.0)	2.0 (1.7)	
Stiffness	1.7 (1.2)	2.0 (2.0)	
Irregularity	2.3 (1.8)	2.3 (1.9)	
Sum of POSAS	8.7 (4.6)	9.0 (6.6)	.77
Overall opinion	2.2 (1.4)	2.4 (1.9)	.54
Width, mm, mean (SD)	0.8 (0.4)	0.9 (0.5)	.09
Elevation, mm, mean (SD)	0.1 (0.5)	0.0 (0.3)	.32
Complications, mean (SD)†	0.4 (0.6)	0.5 (0.6)	.38
Sunken scar, n	8	15	
Uneven edges, n	4	2	
Contour abnormalities, n	2	2	
Infection, n	2	2	
Abscess, n	1	1	
Dehiscence, n	1	0	
Seroma, n	0	0	
Hematoma, n	0	0	
Other complications, n	0	0	

POSAS, Patient Observer Scar Assessment Scale; *SD*, standard deviation.
**P* values from the paired comparisons.
†Statistical analysis was performed only on the sum of complications according to our predetermined data analysis plan.

opinion scores showed no statistically significant differences when comparing everted and planar closure techniques. Likewise, the secondary outcomes of scar width, scar elevation, and frequency of complications at 3 months showed no statistically significant differences between everted and planar closure (Table II).

Optimum technique for wound closure is crucial for the aesthetic appearance of surgical scars, especially for cosmetically sensitive areas of the head and neck. Based on both patient and clinician observations, our study confirms that there were no significant differences in outcomes between everted and planar closure in certain areas of the face and neck. Our studies, taken together, do not support the dogma that skin edge eversion improves cosmetic outcomes in the areas investigated, but larger studies that include more operative locations are suggested before definitive conclusions can be drawn.

Major limitations of this study include the single-center design, and future studies would necessitate enrolling additional health centers to reduce potential population bias.

Another limitation is the sparse number of surgical sites (predominantly the cheeks, forehead, and neck). Results may have differed in other locations. Finally, a limitation is the use of the POSAS scale and its lack of measure for inversion of surgical scars.

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REFERENCES

1. Liu A, Moy RL, Ozog DM. Current methods employed in the prevention and minimization of surgical scars. *Dermatol Surg*. 2011;37:1740-1746.
2. Regula CG, Yag-Howard C. Suture products and techniques: what to use, where, and why. *Dermatol Surg*. 2015;41(Suppl 10):S187-S200.
3. Trufant JW, Leach BC. Commentary: wound edge eversion: surgical dogma or diversion? *J Am Acad Dermatol*. 2015;72:681-682.
4. Moy RL, Waldman B, Hein DW. A review of sutures and suturing techniques. *J Dermatol Surg Oncol*. 1992;18:785-795.
5. Kappel S, Kleinerman R, King TH, et al. Does wound eversion improve cosmetic outcome? Results of a randomized, split-scar, comparative trial. *J Am Acad Dermatol*. 2015;72:668-673.

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