

Elbowplasty: Arm Contouring in The Absence of Massive Weight Loss

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Abstract:

Background : While there is significant discussion of brachioplasty and other arm contouring procedures after massive weight loss, there is a paucity of literature on upper extremity aesthetic surgeries of the average-weight patient. The limited distribution of excess tissue in this patient population presents a risk for over excision directly impacting elbow flexion. This case of skin excision for excess elbow soft tissue demonstrates improvement of aesthetic perception while minimizing tension and protecting function.

Objectives : The authors report a case of arm contouring to address excess skin laxity at the elbow.

Methods : With the patient upright, markings for elliptical incisions were made just superior to each olecranon in horizontal orientation. The excess elbow skin was incised to the subcutaneous fascia, the edges were undermined slightly, and the skin was then closed in two layers.

Results: Improved arm contour while balancing the threat of hindering elbow flexion with the need to minimize excess skin of the elbow.

Conclusions : The authors believe elbowplasty to have potential in future discussion of treatment options for slim patients with complaints of skin laxity.

keywords: arm contouring; elbowplasty; brachioplasty; arm lift

Introduction

Arm contouring has been a published adjunct to aesthetic surgery for nearly a century however, many of the works in current literature focus on skin and soft tissue removal following massive weight loss and fail to describe cases of excising redundant soft tissue in isolated distributions of the upper extremity. With most discussed options for enhancement of arm contour being brachioplasty and liposuction, these procedures fail to address the aesthetic concerns of patients with minimal fat and skin excess. Given the paucity of discussion on techniques, outcomes, and unique challenges of this population of patients with small isolated locations of excess soft tissue that could not be addressed by classical techniques, this paper is set to highlight one such technique that can be utilized in this population. This case is presented to describe a modified technique to correct excess skin laxity while taking advantage of natural skin creases around the elbow and eliminating the need for unnatural appearing scars.

Methods

Photos of the patient were taken preoperatively of the posterior and lateral elbows with the patient upright and arms resting at the sides. The patient

is marked for elliptical incision just superior to the olecranon in horizontal orientation. The area was confined as to not be overly aggressive on active flexion of the elbow. During the procedure, photos demonstrate the amount of skin resected during the elbowplasty.

Results

A 36-year-old female, Fitzpatrick II, underwent excision of excess skin at bilateral elbows with local anesthetic only. On initial physical exam of the extremities, there was loose skin with moderate sun damage and upper extremity folds at the elbows even at full flexion. She was appropriately positioned to give maximum exposure of the elbows laying prone on the procedural room table. The arms were prepped, and the sites injected with 1% lidocaine w/ epinephrine and bicarb buffer. The sites were remarked, prepped with chloropep, and draped with sterile towels. The procedure began by excising the premarked ellipse (Figure 1 and 2) of the skin with 15 blades just down to the subcutaneous fat.



Figure 1: Marked area of the planned resection on full extension illustrating excess skin.



Figure 2: Planned skin excision with arm on maximum flexion.

A small rim of approximately 1 cm was undermined around the edges with iris scissors. Hemostasis was achieved with eye cautery. 0.25% marcaine was used to additional sites of anesthesia. A 2-layer closure was

performed. A series of buried 3-0 vicryl sutures was used to approximate dermis. Horizontal mattress 4-0 novafil was used for epidermal approximation in a tension-free closure (Figure 3).



Figure 3: Immediately postoperative illustrating eversion with permanent sutures.

The operative region was clean with saline-soaked and then dry gauze. Dermabond and steri strips were placed over the incision. Gauze, Kerlix, and ACE were used to wrap the arms. The patient tolerated the procedure well without complication. The patient returned 10 days after the

procedure and the sutures were removed and steri strips were placed over the incision (Figure 4). She continued to limit her elbow flexion for an additional week.



Figure 4: One month postoperative after suture removal illustrating maintained closure with softening of the eversion.

Discussion

Despite having a slim build and no history of massive weight loss, our patient noted isolated worsening excess elbow skin redundancy that warranted surgical excision. Given that many of the described techniques for handling excess skin and fat revolve around long tangential scars and liposuction, a different approach had to be adjusted for handling a case such as the one presented. Rather than electing to continue with a shortened traditional brachioplasty scar, a short horizontal incision that settled into an already existing elbow crease gave a great aesthetically pleasing result. While this plan of elliptical incisions for skin and soft tissue removal is not unique, this technique in combination with playing the scar in a resting skin crease has not been applied to the literature. Given the overall visual outcome and the patient reported satisfaction, this technique was successful and could easily be applied for further cases with similar presenting scenarios.

Conclusion:

Aesthetic improvements of the upper arm can prove to be quite challenging endeavors. While most patient present with complaints of universal excess skin and must be considered for larger resections of skin and soft tissue, some patients may present with complaints of isolated areas that exceed the normal aesthetic boundaries such as redundancy

around the elbow. With that, traditional long scar resections are not applicable and shorter scar versions may lead to aesthetically ill pleasing scar placement and noticeability. Perpendicular elliptical resections can then be employed to both achieve the goal of excising the correct amount of tissue, while also allowing the scar to be hidden within a natural crease. This technique should help broaden the armamentarium when addressing a patients concern with excess skin and soft tissue of the upper arm.

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