Successful Back Contouring with Elimination of Back Rolls using Ultrasound assisted Liposuction and Helium Activated Radiofrequency

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Abstract

Patients are routinely consulted regarding dislike of their upper and middle back contour and associated back rolls that stick out of their bras. Although patients only associate this fullness with excess fat, on examination it becomes evident that back rolls are due to a combination of excess fat as well as skin redundancy. To date, treatment of back rolls has required consideration of excisional surgery such as an upper body lift. We present 15 consecutive back contouring cases that were treated with an alternative protocol involving simultaneous ultrasound assisted liposuction and helium activated radiofrequency. Patients underwent ultrasound assisted liposuction to remove superficial fat over the upper and middle back as well as helium activated radiofrequency to tighten the skin using subdermal coagulation. All 15 patients demonstrated elimination of back rolls and improvement in upper and middle back contour. In summary, simultaneous ultrasound assisted liposuction and helium activated radiofrequency provide an effective treatment for patients desiring improvements in upper and middle back contour and elimination of back rolls while avoiding more invasive excisional surgeries.

Introduction

Patients are routinely consulted in our office regarding improving the contour of their upper and middle back. Patients are most concerned about back rolls that fall out of their bras and which they associate with being overweight. As evident by physical examination findings, patients are educated that back rolls are associated with not only excess fat but more importantly redundant skin. Previous attempts to eliminate back rolls have not been successful for two reasons. First, the fat in this region is superficial only and not amenable to optimal removal using traditional liposuction techniques. This is because traditional liposuction cannulas can only remove deep fat that is loose and not superficial fat that maintains retaining ligaments that prevent uniform cannula penetration. In addition, back rolls maintain a dominant component of skin redundancy. Traditionally, elimination of skin redundancy has often necessitated excisional surgery such as an upper body lift that has the stigma of an unsightly surgical incision and subsequent scar.

We present a novel and effective approach to back contouring with elimination of back rolls that involves the use of ultrasound assisted liposuction and helium activated radiofrequency. The ultrasound assisted liposuction allows for emulsification of fat from the superficial layer which then is amenable to removal with liposuction cannulas that traverse in the deep fat layer. In the process of fat removal from the superficial layer, a plane is created in the subdermal plexus. This plane is then accessible by the helium activated radiofrequency emitting probe that allows for skin tightening by a process termed subdermal coagulation. We present 15 consecutive patients treated for back contouring with elimination of back rolls using the above technique.

Methods

We present 15 consecutive patients treated for dislike of their back contour including back rolls. Patients complained that the rolls were not only unsightly but also often caused them discomfort when they fell out of their bras. Patients were all females and ranged between the ages of 21 and 61. Eleven of the patients presented with one back roll, two patients presented with two back rolls, and two patients presented with three back rolls. All patients underwent ultrasound assisted liposuction using Vaser...
technology of their upper and middle back. Infiltration and aspiration volumes ranged between 100cc to 300cc per side. All patients were then treated simultaneously with helium activated radiofrequency using Renuvion technology to administer subdermal coagulation. Treatment was provided using probes that extended throughout the upper and middle back using the same liposuction port holes. Patients received subdermal coagulation with six passes of 80% power and 3 L/min of helium flow. All port holes were repaired with simple skin stitches using 5-0 Fast absorbing suture. Patients were placed in customized compression garments with foam in-lays which were worn for two weeks. Patients received 5 lymphatic messages performed on days 2, 4, 6, 8 and 10 following surgery. Patients were evaluated with subjective satisfaction and post-operative photographs at 6 months follow up.

Results

All patients demonstrated elimination of their back rolls with improved back contour as depicted by the creation of a "~" Tilde curve. All patients were subjectively satisfied by their aesthetic result and resolution of discomfort associated with preoperative back rolls falling out of their bras. Please see patient before and afters below:

Patient 1

Fig. 1: Improved back aesthetics and elimination of back rolls following ultrasound assisted liposuction and helium activated radiofrequency treatment. Presented above is a 35-year-old female patient demonstrating skin redundancy and excess fat which lead to the formation of a mid-back roll. Successful treatment required liposuction with infiltration and aspiration of 100cc tumescent solution per side as well as skin tightening using subdermal coagulation.
Patient 2

Fig. 2: Improved back aesthetics and elimination of back roll following ultrasound assisted liposuction and helium activated radiofrequency treatment. Presented above is a 44-year-old female patient demonstrating skin redundancy and excess fat which led to the formation of a mid-back roll. Successful treatment required liposuction with infiltration and aspiration of 100cc tumescent solution per side as well as skin tightening using subdermal coagulation.

Patient 3
Fig. 3: Improved back aesthetics and elimination of back roll following ultrasound assisted liposuction and helium activated radiofrequency treatment. The 47-year-old female patient above presented excessive skin redundancy leading to the formation of three back rolls as pictured above. Successful treatment required liposuction with infiltration and aspiration of 150cc tumescent solution per side as well as skin tightening using subdermal coagulation.
Fig. 4: Improved back aesthetics and elimination of back roll following ultrasound assisted liposuction and helium activated radiofrequency treatment. The 48-year-old female patient presented above demonstrates skin redundancy and excess fat which led to the formation of a back roll. Successful treatment required liposuction with infiltration and aspiration of 250cc tumescent solution per side as well as skin tightening using subdermal coagulation.

Fig. 5: Improved back aesthetics and elimination of back roll following ultrasound assisted liposuction and helium activated radiofrequency treatment. This 61-year-old female patient presented excess fat and skin redundancy which led to the formation of two back rolls. Successful treatment required liposuction with infiltration and aspiration of 200cc tumescent solution per side as well as skin tightening using subdermal coagulation.
Fig. 6: Improved back aesthetics and elimination of back roll following ultrasound assisted liposuction and helium activated radiofrequency treatment. This 39-year-old female patient presented above presented two back rolls due to excessive fat and skin redundancy. Successful treatment required liposuction with infiltration and aspiration of 200cc tumescent solution per side as well as skin tightening using subdermal coagulation.

Fig. 7: Improved back aesthetics and elimination of back roll following ultrasound assisted liposuction and helium activated radiofrequency treatment. This 21-year-old female patient presented above has skin redundancy and excess fat leading to the formation of one back roll. Successful treatment required
liposuction with infiltration and aspiration of 300cc tumescent solution per side as well as skin tightening using subdermal coagulation.

Patient 8

Fig. 8: Improved back aesthetics and elimination of back roll following ultrasound assisted liposuction and helium activated radiofrequency treatment. The 26-year-old female presented above came in with excessive fat and middle back skin redundancy leading to the formation of one back roll. Successful treatment required liposuction with infiltration and aspiration of 300cc tumescent solution per side as well as skin tightening using subdermal coagulation.

Patient 9

Fig. 9: Improved back aesthetics and elimination of back roll following ultrasound assisted liposuction and helium activated radiofrequency treatment. The 35-year-old female presented above came in with excessive middle back skin redundancy leading to the formation of a back roll. Successful treatment required liposuction with infiltration and aspiration of 200cc tumescent solution per side as well as skin tightening using subdermal coagulation.
Fig. 10: Improved back aesthetics and elimination of back roll following ultrasound assisted liposuction and helium activated radiofrequency treatment. This 51-year-old female patient presented above demonstrates excessive fat and skin redundancy leading to the formation of one back roll. Successful treatment required liposuction with infiltration and aspiration of 250cc tumescent solution per side as well as skin tightening using subdermal coagulation.

Patient 11

Fig. 11: Improved back aesthetics and elimination of back roll following ultrasound assisted liposuction and helium activated radiofrequency treatment. The 31-year-old female patient presented above came in with excessive middle back skin redundancy leading to the formation of one back roll. Successful treatment required liposuction with infiltration and aspiration of 300cc tumescent solution per side as well as skin tightening using subdermal coagulation.

Patient 12
Fig. 12: Improved back aesthetics and elimination of back roll following ultrasound assisted liposuction and helium activated radiofrequency treatment. This 30-year-old female patient presented above presented two back rolls due to excessive fat and skin redundancy. Successful treatment required liposuction with infiltration and aspiration of 300cc tumescent solution per side as well as skin tightening using subdermal coagulation.

Fig. 13: Improved back aesthetics and elimination of back roll following ultrasound assisted liposuction and helium activated radiofrequency treatment. This 40-year-old female patient presented above came in with excessive middle back skin redundancy leading to the formation of one back roll. Successful treatment required liposuction with infiltration and aspiration of 250cc tumescent solution per side as well as skin tightening using subdermal coagulation.

Patient 14

Fig. 14: Improved back aesthetics and elimination of back roll following ultrasound assisted liposuction and helium activated radiofrequency treatment. This 50-year-old patient presented above came in with excessive middle back skin redundancy leading to the formation of three back rolls. Successful treatment required liposuction with infiltration and aspiration of 250cc tumescent solution per side as well as skin tightening using subdermal coagulation.
Patient 15

Fig. 15: Improved back aesthetics and elimination of back roll following ultrasound assisted liposuction and helium activated radiofrequency treatment. This 36-year-old patient presented above came in with excess fat and skin redundancy leading to the formation of a slight back roll. Successful treatment required liposuction with infiltration and aspiration of 300cc tumescent solution per side as well as skin tightening using subdermal coagulation.

Discussion

To date, contouring of the back has been limited by available technology which could only address removal of the deep fat and elimination of redundant skin with an excisional procedure only. These procedures were suboptimal because the majority of fat in the upper and middle back are limited to the superficial layer that is not amenable to optimal removal with traditional liposuction techniques. Instead, Vaser technology is able to effectively remove the superficial fat in these areas by first emulsifying this fat that is intimately associated with superficial retaining ligaments. In addition, no viable techniques were available to address skin looseness without an excisional procedure requiring an incision line. This technique of excisional skin removal has not been favorable as most patients would like to avoid the stigma of an incision line and subsequent scarring over the upper and middle back. In this paper, we present a novel approach of treatment of upper and middle back rolls that involve excess superficial fat and skin redundancy. In fact, skin redundancy may be a bigger component than excess fat for most patients with back roll concerns. This concern can now be addressed using minimally invasive Renuvion subdermal coagulation skin tightening.

Conclusion

We presented 15 successful elimination of back rolls and aesthetic back contouring using ultrasound-assisted liposuction and helium activated radiofrequency treatments that are less invasive than a traditional upper body lift. All patients treated demonstrated aesthetic improvement of back contour and elimination of back rolls. Patients were followed up at six months with post-operative
documentation of back roll elimination and subjective satisfaction of their results. In summary, we present an effective alternative to prior contouring procedures that benefit from avoidance of surgical incision lines, unsightly scars, and more invasive maneuvers.

References

