BRIEF ARTICLES

Successful Deoxycholate Acid Use in a Male Patient for Resistant Lower Abdominal Wall Fat

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ABSTRACT

In this patient off-label Kybella was effective in improving the contour and removing excess lower abdominal fat after two treatments. While off-label use of Kybella is commonly used every day by physicians across the United States, it is not well represented in the literature. This case is presented to aid in the discussion of new, safe, noninvasive treatment techniques in which healthcare demand and delivery has outpaced publication and literature support.

INTRODUCTION

Even after significant weight loss and exercise some patients fail to achieve desirable results in reducing subcutaneous fat in certain recalcitrant areas. The lower abdominal wall can be an area with difficult to remove subcutaneous fat. The number of treatment options available for healthcare providers is continuing to increase and strive to fulfill the growing demand and need for these types of procedures.[1]

In the past the only treatment options for patients included invasive and expensive surgical procedures with serious potential side effects.[2] In the more recent history several less invasive treatments have become available but still carry post-operative recovery time and pain. Very recently a few minimally invasive options have become available for patients.[3]

One of the recent minimally invasive techniques is injection of Deoxycholate Acid for lipolysis of submental subcutaneous fat. While only currently FDA approved for submental subcutaneous fat,[3,4] it is used frequently for other body areas with difficult to remove excess subcutaneous fat.[5,6] Having multiple treatment options available helps patients and healthcare providers tailor treatment plans to a patient's specific needs, financial resources, and tolerance to the procedure.[1]

Deoxycholate acid is an endogenous secondary bile acid produced in the intestines by bacterial action on cholate, which is secreted by the liver.[7] Endogenously it facilitates the absorption and transport of dietary fats and other hydrophobic nutrients.[7] When injected subcutaneously the action of DCA is very limited in protein rich tissues but will retain some action in subcutaneous fat deposits

where the protein concentration is comparatively poor.[5,8] With functional activity being limited to fatty deposits, it allows selective lipolysis to targeted tissues and provides a favorable safety profile.[5,8,9] It is currently available in a synthetically derived formulation by Allergan and available in the United States as Kybella.[4]

CASE PRESENTATION

A healthy and physically fit 60-year-old Caucasian male presented for nonsurgical treatment of his lower abdominal fat. Patient reported failure to resolve the excess accumulation of fat in the lower abdominal area after multiple years of strict diet control and extensive daily exercise. Physical examination showed BMI <25kg/M^2, minimal subumbilical abdominal wall protuberance with mild excess fat and mild skin laxity. A complete history and physical exam failed to show any contraindications or reason to exclude treatment. Treatment options where discussed in detail including expectations, complications, side effects, and cost. The patient expressed desire to strictly avoid surgical intervention, liposuction techniques, and cryolipolysis and opted for treatment with the off-label use of Kybella. A written consent for the off-label procedure and pictures (**Figure 1**) of the treatment area were obtained prior to procedure start.

The patient was placed sitting in the semi-supine position in the exam chair. Ice packs where applied to the area 5 minutes prior to procedure start while injection sites where planned. Patient underwent 5 injections into the subcutaneous fat with a 1/2" 30-gauge needle held perpendicularly to the skin. Special attention was given to not inject intradermal or into the underlying muscle or fascia. During injection the abdominal skin and subcutaneous fat was pinched and pulled away from the abdominal wall to further prevent injection into deeper tissues. After injection ice packs were reapplied and the patient reported negligible pain and a mild burning sensation. No bleeding or bruising was appreciated and the patient was observed in the office for 1 hour. The patient reported minimal burning sensation and swelling which gradually declined and resolved by 1 week after injection. The patient also reported negligible tenderness to palpation which resolved by day 14 post injection. The patient was again reexamined at 4 weeks post injection. At that time the patient appreciated a modest improvement in the contour of the treatment area. The patient expressed desire for continued treatment and the patient underwent a second treatment 1 week later utilizing the same technique as before. The patient's experience was similar to the first treatment and he noticed continued improvement of his lower abdominal contour. The patient was reevaluated 4 weeks later with pictures (**Figure 2**) taken and reported being highly satisfied with the outcome of his treatments.

Figure 1. (**A**) Patient photos prior to treatment initiation

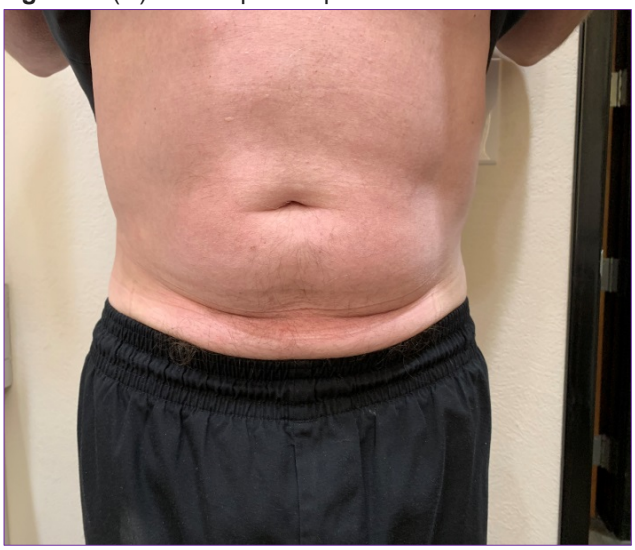

Figure 1. (**B**) Patient photos prior to treatment initiation

Figure 2. Patient photos 4 weeks after completing the second treatment

DISCUSSION

Targeted lipolysis by injection of DCA in off label locations is widespread throughout aesthetic healthcare and is widely advertised and even openly discussed in lay beauty publications. While physicians utilizing this treatment may have become common place in the aesthetic market, comparatively little published literature is available. While standardized treatment regimen may not yet exist for off label locations,[5,10,11] physicians have and will continue to develop reasonable nonsurgical treatment plans for diet and exercise resistant lower abdominal wall fat.[12]

Minimally invasive treatments available for patients with resistant abdominal wall fat are growing, and give the ability for physicians to tailor treatment options towards a patient's individual needs, expectations, and resources.[1] As the aesthetic medicine continues to grow, patient preference and satisfaction favors minimally invasive techniques,[1] which greatly minimize recovery time improving patient privacy.

CONCLUSION

In this patient off-label Kybella was effective in improving the contour and removing excess lower abdominal fat after two treatments. While off-label use of Kybella is commonly used every day by physicians across the United States,[5,11] it is not well represented in the literature.[10] This case is presented to aid in the discussion of new, safe, noninvasive treatment techniques in which healthcare demand and delivery has outpaced publication and literature support.

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