

HACKS

DEOXYCHOLATE INJECTION LIPOLYSIS OF FLANK FAT IN A HEALTHY MALE PATIENT



An innovate, minimally-invasive solution for “love handles.”

BY S. MANJULA JEGASOTHY, MD, FAAD

In recent years, the Internet and social media have created a much higher standard for “ideal” appearance and overall body image, resulting in a growing demand for aesthetic treatments in both men and women.¹ At the same time, newer technologies have become better able to non-invasively provide body-contouring therapies for localized “problem areas” in non-obese individuals. The flanks are a common location for which nonsurgical cosmetic treatment is sought, especially by men. Multiple options, such as abdominoplasty,² liposuction,³ laser therapy (using laser diodes, Erchonia Corporation⁴ and SculpSure, Cynosure⁵), radiofrequency treatment (Vanquish METM, BTL Industries⁶ and truSculpt, Cutera⁷), ultrasound therapy (UltraShape, Candela⁸), and cryolipolysis (CoolSculpting, Zeltiq Aesthetics⁹ and CoolCurve+ applicator, Zeltiq Aesthetics¹⁰), are available for contouring the flank bulges, also known as “love handles,” in male patients. While liposuction and abdominoplasty can be effective options, many patients (especially male patients) with mild/moderate flank fullness typically do not want surgery and opt for minimally invasive or noninvasive therapies in order to avoid surgical recovery time, surgical scar formation, and other possible complications/“hassle factors.” In addition, adult males do not visit physicians as habitually as females do,¹¹ and therefore do not want to undergo fat reduction treatments that require multiple initial sessions for

efficacy and infinite treatment sessions for maintenance of results. Furthermore, some patients prefer utilizing a naturally occurring organic substance for body contouring over an electric source such as laser, ultrasound, or radiofrequency.

Deoxycholic acid (DCA) is an endogenous bile acid that facilitates intestinal absorption of fats. A synthetic formulation of DCA, the DCA injection (ATX-101; Kybella [United States], Belkyra [Canada]; Kythera Biopharmaceuticals, Inc., acquired by Allergan, Inc.), is the first and currently only injectable treatment FDA-approved to improve the appearance of submental fat.¹² In our clinical experience, DCA can also be used off-label for successful nonsurgical body contouring in other anatomical areas.¹³ In this case report, we describe our early experience utilizing subcutaneous DCA injection to improve overall body contour by reducing flank size in a non-obese healthy male patient. This represents the first report in the American medical literature of successful flank fat reduction using DCA injections.

CASE REPORT

A 39-year-old healthy Indian male presented with excess fat in the flanks, also commonly known as “love handles,” requesting a reduction of fat in this specific area to improve his overall upper body contour. On general examination, no abnormality was detected. Local examination revealed mild



FIG. 1A: BEFORE



FIG. 1B: AFTER

to moderate non-tender fat deposits in both flanks (Figure 1A). The overlying skin was normal.

After discussing with this patient his therapeutic expectation, which was a reduction in flank size so that he could look “slimmer” in business shirts and suits, we discussed possible therapeutic options with him. He did not want surgery and preferred to use a naturally occurring substance for therapy over multiple radiofrequency or ultrasound treatments that also usually require maintenance therapy, even after therapeutic goals are achieved to a patient’s satisfaction. Our patient had also read about and heard in the commercial media about DCA injection lipolysis and chose the same. The DCA procedure and possible side effects (injection-site edema, hematoma, pain, numbness, erythema, and induration)¹² were explained and off-label consent was obtained.

DCA injections were administered with the patient in a seated position, with the patient’s underwear band positioned at a customary height to maximize flank bulge visually. Using a 32-gauge needle held perpendicular to the skin, injections of 0.15mL DCA, spaced 0.5-1.0cm apart in the subcutaneous fat covering the entire treatment area, were injected in the left and right flanks. A total of 4mL DCA (2mL DCA on each side) was injected during a single treatment session. Ice packs were applied to the treatment area for five minutes before and after the procedure to minimize pain and discomfort.

The patient was kept under observation in the clinic for 30 minutes. He experienced moderate tenderness in the treatment area that subsided within 10 minutes. During the first two weeks following treatment, he reported a mild increase in flank bulging; this was followed by a subsequent decrease in post-treatment swelling. He reported his flanks being back to baseline size at two weeks post-treatment but mildly tender to palpation for up to four weeks post treatment. From four to 12 weeks after treatment, the patient noted a gradual but evident reduction in his flank size. These changes are evident in the photographic assessments taken before treatment (Figure 1A) and three

months after treatment (Figure 1B). There was no re-accumulation of fat over a follow-up period of 12 months. The patient was highly satisfied with the treatment outcome.

DISCUSSION

Nonsurgical cosmetic treatments for the face and body are vastly preferred by most patients currently,¹⁴ especially the aesthetic male patient.¹⁵ In addition, because of time constraints, many male aesthetic patients prefer a more rapid resolution to body fat reduction than multiple radiofrequency/ultrasound treatments requiring multiple time-consuming office visits. Lastly, a naturally occurring agent is preferred by many patients. Since DCA, or deoxycholic acid, is a naturally occurring bile acid, it satisfies the preferences of this patient cohort. Patients often seek treatment of the flanks or “love handles.”^{3,9} Since flanks are the most common body-image “problem” reported by the aesthetic male patients in our experience, we thought it most important to demonstrate DCA’s efficacy in this body area in this patient. DCA injection lipolysis could be a safe and effective method for treating “love handles” in such patients. Pending results of Phase 1 clinical trials (NCT01319916, NCT01462786, NCT00835952, and NCT01632917) evaluating the administration of DCA in subcutaneous abdominal fat, reports of treatment in other body fat areas such as the present case are of vital importance.

In addition, in our clinical experience, our patients’ satisfaction with their improvement from nonsurgical fat reduction procedures is often higher than their photography indicates. Furthermore, as the treatment for this case report was conducted early in our off-label aesthetic DCA injection lipolysis experience, to ensure patient safety, the dosing in this case report was lower than we will use in the future. Even so, our results were satisfactory in our opinion, photographically, and to the patient. Our early findings in treating the flanks with DCA lead us to believe that the fat cells here may be more compact, and therefore more resistant to local injection adipolysis than the neck, bra-line, or

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stomach. Therefore, we recommend using higher dosing strategies per treatment session and more treatment sessions for treating this area than this case report demonstrates. Larger clinical studies for assessing tolerable dose range and efficacy in this body area and patient population are needed to validate our initial results.

In our early clinical experience, DCA injections are a safe and effective treatment option for improving body contouring in certain anatomic areas in select patients by reducing small, localized fat deposits that are not responsive to diet and exercise.¹³ In this case study, a healthy non-obese male patient demonstrated substantial improvement in appearance of his flanks/“love handles” after a single session of DCA injection lipolysis. DCA injection lipolysis of the flanks is therefore a viable and potentially popular non-surgical innovative method of treating flank fat—commonly called “love handles” in men (seen here) and the “muffin top” in women. Careful patient selection as well as in-depth understanding of anatomy and technique yields optimal results, as exemplified in the present case report. To our knowledge, this is the first report of an off-label DCA use in the American medical literature to improve the appearance of flank fat/“love handles” in a male patient.

CONCLUSION

We present the first American case report of successful reduction of flank fat (a.k.a. “love handles”) with a single treatment of DCA injection. Larger clinical studies for assessing tolerable dose range and efficacy in this body area and patient population are needed to validate these initial results. ■

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