

An Adipocytolytic Aqueous Micro-Gelatinous Solution for Buffalo Hump Deformity Reduction

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ABSTRACT

Buffalo hump is a manifestation of HIV related lipodystrophy, it is characterized by an enlargement of dorsocervical fat pad and is distressing for patients. Surgical correction until a few years ago was the only option for treatment, however in last years non surgical corrections was carried out with minimally invasive techniques. Authors report this case that describe a longer follow up of an already published study where this deformity was treated with the injection of an adipocytolytic aqueous micro-gelatinous solution and during all the follow up no relapse was observed.

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BACKGROUND

Long-term treatment with antiretroviral medications, especially with protease inhibitors, has been shown to cause a syndrome called HIV-associated lipodystrophy.¹ Lipodystrophy manifests as both lipoatrophy in the face and extremities and lipohypertrophy in such areas as the dorsocervical region (buffalo hump), lower abdomen, and breast (breast enlargement or gynecomastia). At this time, a number of medical, pharmacologic, and surgical therapies are used to treat HIV lipodystrophy. However the optimal therapeutic approach is still under discussion.^{2,3,4,5,6,7} We present a report of an alternative non-surgical technique of buffalo hump reduction.

CASE REPORT

A 52-year-old Caucasian man, HIV positive in HAART (Highly Active Anti-Retroviral Therapy) treatment for 12 years prior to presentation, was referred to my office for management of lipodystrophy. He showed facial lipoatrophy (grade 3 in James facial lipoatrophy severity scale) and a mild buffalo hump deformity. After physical examination, liposuction of the dorsocervical fat pad, and structural fat graft of the face was proposed, but patients refused surgery. As alternative treatment, polyacrylamide gel injection for facial wasting rehabilitation, and the injection of an adipocytolytic aqueous micro-gelatinous solution (intralipotherapy) for buffalo hump reduction was proposed.

Patient was fully explained about no experience about buffalo hump treatment with intra-lipotherapy, but he accepted the treatment and informed consent was firm.

Before buffalo hump treatment, an ultrasonographic examination, and photographic documentation of the dorsocervical fat pad were performed. Three sessions were performed, one every 3 weeks; in each session a vial of 8 mL of an aqueous micro-gelatinous solution (Aqualyx), plus 0,2 mL of lidocain (as explained by the producer), was injected. As indicated by the producer specific needle were used (lipoinject needle - marllor int. Italy).

At each session the area to be injected was carefully cleaned with clorexidine 0,2%; sterile gloves were used by the physician, asepsis rules were followed; no antibiotic therapy was performed after treatment. After each session a light swelling and ecchymosis were referred by the patients for about 7 days. No major, nor minor complications were registered.

Clinical improvement was documented by photos (Figures 1, 2, 3, 4) and was reported by the patient after each treatment.

Four weeks after last session a new ultrasonographic examination was performed to assess the result, it showed 5 mm reduction of the dorsocervical fat pad. An 18-month follow up showed no relapse of the dorso-cervical fat hypertrophy (Figure 5)

DISCUSSION

Buffalo hump deformity is a well-described manifestation of HIV-associated lipodystrophy. Treatment for cervicodorsal fat pad (buffalo hump deformity) enlargement has been challeng-

FIGURE 1. Pre-op picture of the patient.



FIGURE 2. Post-op picture (4 weeks after last injecting session).



FIGURE 3. Pre-op ultrasonographic examination.

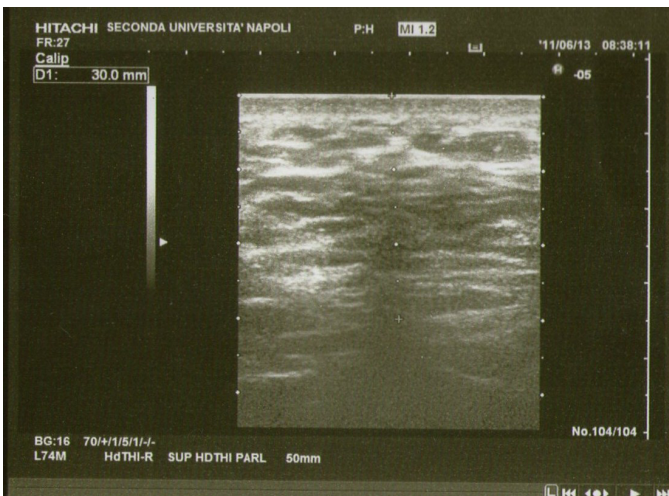
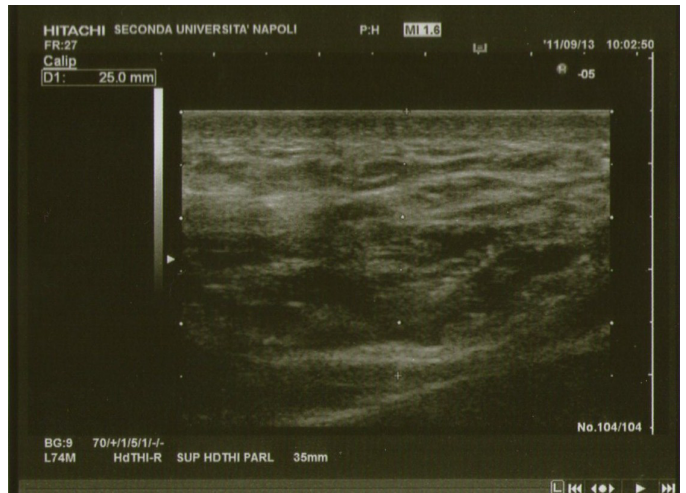


FIGURE 4. Post-op ultrasonographic examination (4 weeks after last injecting session).



ing, as the hypertrophied fat is notoriously resistant to most attempted therapies. The effects of cessation and alteration of antiretroviral therapies on the presence of the deformity have been studied extensively, but results have not shown consistent improvement in either the cervicodorsal hypertrophy or on the other manifestation of the syndrome.² Although several medical treatments, including recombinant growth hormone and anabolic steroids, have been used with varied improve-

ment, until now surgical approaches have been the mainstay of correction of cervicodorsal enlargement.^{3,4,5}

However, in a recent paper, Witord et al. showed the lipolytic effectiveness of phosphatidylcholine, an off-label drug, in the treatment of buffalo hump of HIV patients.⁸

FIGURE 5. 15 months follow-up result.

In the present paper we used an aqueous micro-gelatinous solution containing a polymer of 3:6-anhydro-l-galactose and D-galactose, buffer systems, 3 α ,12 α -Dihydroxy-5 β -24-oico Cholanic Acid sodium salt, physiologic solution, and sodium chloride, that attained CE certification and has been in clinical use since 2009 under the brand name Aqualyx (Ghimas S.p.A., Casalechio di Reno-BO- Italy), also called Motolese's solution, to reduce the buffalo hump deformity. Aqualyx is a biocompatible totally absorbable micro-gelatinous aqueous solution indicated for the treatment of localized adiposities

This protocol called is indicated for the non-surgical reduction of localized adipose deposits in the supero-lateral region of the thigh, also called "coulotte de cheval", from the medial thigh area and from the medial zone around the knee and hips; this technique has never been performed to reduce buffalo hump deformity.

As already shown in literature, structural fat graft seems to be the best option in facial wasting rehabilitation; the use of the peripheral hypertrophied fat, harvested with cannulas, let to restore the hypotrophied areas, such as the face, and, in the same surgical step, let to achieve a pleasant body contour.^{9,10}

In this report the patient refused surgical treatment, so medical treatment were performed.

Ultrasonographic examination showed a slight reduction of the hypertrophied dorsocervical fat pad, and clinically the result was good with no relapse in a longer follow-up study than the first already described with the same technique.¹¹

ACKNOWLEDGMENT

The authors have not disclosed any potential conflicts.

DISCLOSURES

Dr. Rauso is a speaker for Marllor Int, Italy and Healthxchange. Dr. Curinga and Dr. Rusciani have not disclosed any potential conflicts.

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