

# HIV-related facial wasting

Facial fillers are used to help correct HIV facial wasting. Dr Sean Cummings discusses his techniques

Facial wasting associated with HIV disease and treatment affects more than 40% of patients taking highly active antiretroviral therapy (HAART). There are said to be particular culprits in the treatment regimes, but it seems likely most of the treatments will cause or accentuate facial wasting.

Facial wasting is partly an idiosyncratic response to particular medications. In some, switching regime is an appropriate option and may result in stabilisation or replenishment of subcutaneous fat. For most, this is not a reality and other more direct interventions are required.

In HIV, facial wasting results from loss of subcutaneous fat and normal ageing associated with a rotational forward and downward movement of facial skin. This causes accentuation of naturally occurring dynamic lines and enhancement of the hollows in the cheek, para-nasal and temporal areas.

HAART has dramatically altered quality and length of life in HIV positive individuals and resulted in significant alteration in supervening disease patterns through what is now recognised as a chronic long term illness. However, the metabolic changes associated with abnormal movement and collections of fat are very definite causes of depressive illness and low self-esteem in these individuals. Many feel exposed and feel that their status is inadvertently disclosed by their appearance. Many will withdraw from normal social interaction and from work. Constant reminders of the degree of wasting such as looking in shop windows are actively avoided.

## Unmatched despair

Facial wasting produces a despair which is unmatched in other illness. Sufferers perceive themselves to be obviously identifiable as having a stigmatised disease which induces fear in their communities, particularly gay society. This desperation has led to patients being prepared to explore and utilise unproven strategies *vis-à-vis* reconstructive procedures, often with unsatisfactory or just plain bad results. Further complication comes in the form of argument relating to funding, which largely stems from the procedures being seen as cosmetic rather than therapeutic. Psychiatric scoring methods have, though, confirmed a marked improvement in psychological well-being following reconstruction.

Facial fillers of varying descriptions have been used in an attempt to correct HIV facial wasting. The list is long and includes Bio-Alcamid; New Fill; fat transfer; collagen; silicone and hyaluronic acid.

My personal preference is to use Bio-Alcamid, New Fill and in some instances the

Restylane brand of hyaluronic acid. Where there are side-effects or unwanted effects, these are generally recognised and patients have a greater chance of making an informed choice as to which agent. Most of the products available and used in treatment of HIV wasting have been developed for treatment



Before and after photos using Bio-Alcamid for treating facial wasting

Left and right: pre- and post-Bio-Alcamid, 9.5ml injection



Photos: Clinic E'stetica



Before and after photos using Bio-Alcamid for treating a female patient



Photos: Clinic E'stetica

of lines and wrinkles and have not been evaluated in treatment of large volume loss. Consequently safety information is mainly based on anecdotal and observational study.

## Bio-Alcamid

Bio-Alcamid is a "hydrogel" comprising networks of alkyl-imide groups and non-pyrogenic water. It is a very large volume filler with wide variation in maximum injection volumes, dependent mainly on the size of the defect to be filled. Upwards of 500ml have been injected. Facial use is restricted so far to approximately 40ml or so. The gel is a thick, tenacious clear product and acts simply as volume replacement with seemingly no effect on the structure of the skin itself.

HIV may cause increased susceptibility to bacterial infection. My routine is to give prophylactic antibiotics and aciclovir before and six hours' post procedure. The skin is prepared using careful aseptic technique. Intra-oral anaesthesia using lidocaine with adrenaline is used to block the infra-orbital nerve bilaterally and lidocaine is injected to the face superficially to ensure comfortable pain free introduction of the product.

The areas to be treated are agreed with the patient and marked using a make-up pencil which wipes off easily. The areas most commonly treated first in these patients are the paranasal defects and the cheeks. Use of Bio-Alcamid in the temporal area is possible.

Bio-Alcamid comes prepackaged in 5ml syringes. I decant these using sterile three-way stop-cocks into two 2.5ml syringes. These are easier to handle, and the manual pressure needed to express the product is reduced. A sharp 18-gauge needle is used to penetrate the full thickness of the skin just over the lateral aspect of the cheekbone. A characteristic loss of resistance is felt and the needle is then angled downwards towards the identified target area sub-cutaneously.

This is usually free of sensation. Obvious dangers of blind introduction of a large

sharp instrument include vessel damage. Generally, the anaesthesia will give good coverage but leave vessels sensitive. Gentle introduction of the needle allows for safe navigation to the target. Required volumes are then injected. The patient is able to sit and inspect through the procedure.

The gel is then gently massaged through the overlying skin to mould it into the desired area. The introduction points are massaged and "milked" to express any residual product which may result in undesired lines and also act as an infection portal. Excess product is dissolved using hydrogen peroxide solution. Bio-Alcamid is removable, if needed, by direct puncture over the product and expression by pressure.

## New Fill

Unlike Bio-Alcamid, New Fill is injected into the dermis/epidermis and has a direct effect on the structure of the skin, stimulating new collagen growth. My experience of use of this product is less than that of the others. New Fill is possibly the most discussed treatment for HIV facial wasting and is the present gold standard.

New Fill or poly-lactic acid requires preparation at least several hours before the patient attends, preferably overnight. The manufacturers originally suggested dilution volumes of 3ml sterile water. In my experience of HIV patients treated with New Fill this seemed to have a greater propensity to leave long-lasting, irregular sized and shaped lumps. These lumps have not yet been histologically defined, but I suspect they comprise excess amounts of collagen.

The use of 5ml diluent gives a smoother, more uniform appearance. The skin needs little preparation, if any. Many practitioners, myself included, will add lidocaine to the product as part of the diluent to make the procedure more comfortable. Using ice packs to the face immediately before injection will reduce the discomfort.

The New Fill is repeatedly injected over the treatment area with multiple punctures. These are described as uncomfortable only. There is an immediate volume replacement effect from the diluent alone. So patients need to be expressly counselled before the procedure and told that, in 24-48 hours, the immediate effect will disappear with the collagen-thickening effect, occurring later.

In one study, patients with severe wasting were given four or five injections of New Fill. At six months skin thickness had increased by 9.5mm. Patients report high satisfaction with New Fill. The downside is the need for repeated injections to maintain the same effect.

## Restylane Sub-Q

Sub-Q is a new product from the maker of Restylane and is for use in larger defect areas. It is non-animal stabilised hyaluronic acid and a thicker product with 1000 gel particles per ml as opposed to 100,000 gel particles in Restylane. It is slowly absorbed and may possibly have a duration of action of nine months or so.

Restylane Sub-Q has promise in treatment of small to medium defects in HIV disease, such as the cheek area; para-nasal defects and also the temple area. It is packaged in 2ml syringes and is a viscous clear gel, with a similar appearance to Bio-Alcamid, though less viscous. The skin needs cleansing prior to introduction, the product being placed sub-cutaneously as with Bio-Alcamid. The manufacturer recommends a maximum volume of 2ml to be placed at any single site on a single occasion but suggests further top-ups may be necessary.

A small incision is made either with a no-core needle or small scalpel blade. A blunt 18-gauge cannula is then introduced sub-cutaneously and directed toward the targeted treatment area. A threading technique is used, repeatedly withdrawing the needle and injecting on withdrawal, then repeat. This gives a good, uniform fill effect. Like Bio-Alcamid, it may be removed—this time by aspiration using a syringe.

Being a new product, I have little experience of Restylane Sub-Q, but I am excited by its potential in treating temple wasting, the ability to introduce a large volume filler, albeit on a short temporary basis, using a blunt cannula to an area with particular hazards, notably the temporal artery. HIV disease continues to provide more than its fair share of challenges. One is to ensure that successful treatment of the illness is not marred by inability to correct iatrogenic effect. ●

Dr Sean Cummings MBBS, DRCOG, DFFP, LLM, MRCPG; 19 Wimpole Street, London W1G 8GE. Tel: +44 (0)20 7323 9007 website: [www.freedomhealth.co.uk](http://www.freedomhealth.co.uk) email: [sean@freedomhealth.co.uk](mailto:sean@freedomhealth.co.uk)