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Dermal fat graft for correction of the mentolabial groove: a technical note

Injerto de grasa dérmica para la corrección del surco mentolabial: nota técnica

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Palabras clave:
surco mentolabial, injerto de grasa, estética facial.

ABSTRACT

The mentolabial groove is an important anatomical feature of the lower facial third that can become more pronounced with aging, muscular hypertonia, or after chin advancement procedures. An excessive depression in this region may compromise facial aesthetics and require corrective treatment. Fat grafting has emerged as a reliable technique to restore volume and improve contour due to its biocompatibility, natural appearance, and long-term stability. This article describes the use of micro-fat grafting for the correction of a deepened mentolabial groove following genioplasty. Adipose tissue was harvested from the lower abdominal region using a manual aspiration technique after infiltration of a tumescent solution. The collected fat was decanted and centrifuged to isolate viable adipocytes. Micro-fat was then prepared and injected through a blunt cannula into a previously dissected subdermal plane of the mentolabial groove. This approach allowed precise volumetric correction and contour refinement. Fat grafting represents a minimally invasive complementary technique to improve postoperative aesthetic outcomes in genioplasty patients.

RESUMEN

El surco mentolabial es una característica anatómica importante del tercio inferior facial que puede acentuarse con el envejecimiento, la hipertonía muscular o después de procedimientos de avance mentoniano. Una depresión excesiva en esta región puede comprometer la estética facial y requerir tratamiento correctivo. El injerto de grasa se ha consolidado como una técnica confiable para restaurar volumen y mejorar el contorno debido a su biocompatibilidad, apariencia natural y estabilidad a largo plazo. Este artículo describe el uso de microinjerto de grasa para la corrección de un surco mentolabial profundizado posterior a una genioplastia. El tejido adiposo se obtuvo de la región abdominal inferior mediante una técnica de aspiración manual tras la infiltración de solución tumescente. La grasa recolectada se decantó y centrifugó para aislar adipocitos viables. Posteriormente, se preparó micrograsa que fue infiltrada con una cánula roma en un plano subdérmico previamente disecado del surco mentolabial, logrando una corrección volumétrica precisa y mejoría estética. El injerto de grasa constituye una técnica complementaria mínimamente invasiva para mejorar los resultados estéticos postoperatorios en pacientes de genioplastia.

Certain areas of the face may develop deep grooves that affect aesthetics. One such groove is the mentolabial groove, which can deepen with age or muscular hypertonia. Fat grafts can improve the volume of the affected area and achieve an aesthetic effect.[1] Fat transfer is appealing because it provides a more natural appearance and offers good long-term results.[2,3]

After genioplasty (with the pogonion at the ideal point), the mentolabial groove may become more pronounced due to the advancement movement, making it a candidate for fat transfer. The procedure begins with marking the donor site, which is usually the lower abdomen. Next, the tumescent solution is infiltrated (100 mL of 0.9% saline solution, 2 mL of 1% plain lidocaine, and 0.1 mL of 1:1:000 ephinephrine). Using a manual harvesting technique, a 20 mL syringe with negative pressure is employed to collect the fat graft from the superficial layer of the subcutaneous fat. The fat graft is decanted for 10 minutes and centrifuged at 1,000 rpm for one minute in a model PLC-05 1.6A centrifuge. The top layer

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Figure 1: *Fat transferring through luer-lock connectors.*

Figure 2: *Fat deposition in the recipient area.*

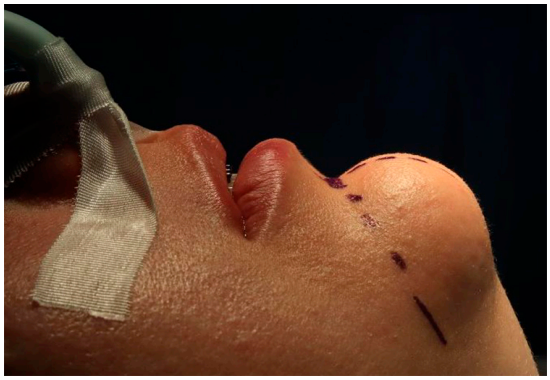

Figure 3: *Clinical depiction of mentolabial groove correction.*

of fatty acids and the bottom tumescent solution layer are discarded, leaving only the middle layer with the adipocytes.

Micro-fat is required to support and add volume to the groove. It is transferred through luer-lock connectors at a size of 1 mm *(Figure 1)*. With the recipient area prepared, an incision lateral to the mentolabial groove is made using a 2 mm entry point with a No. 11 scalpel blade. Dissection is performed with a 20G needle to break the collagen fibers and create a channel between the skin and the muscle. The fat transfer is carried out with a 5 mL syringe and a 1 mm blunt cannula to apply the graft at a low pressure while sculpting it in the recipient area *(Figures 2 and 3)*.

Adipose tissue-derived stem cells are a promising area of research with potential applications in tissue engineering and facial regenerative medicine.[4] Fat grafting can be performed as an independent procedure or as a complementary technique following bone surgeries to comprehensively improve congenital, traumatic, or adquired defects.[5]

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