

Polymethylmethacrylate in the face: A retrospective study of 132 patients thorough 1999 to 2005

Polimetilmetacrilato en la cara: Estudio retrospectivo de 132 pacientes de 1999 a 2005

OSVALDO DE PRETTO,* GERARDO MORENO-ARIAS**

* Hospital Aliança, Grupo de Dermatologia Irmã Dulce, Salvador (Bahia, Brazil), **Centro Médico Teknon, Barcelona (Spain)

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Dear Editor:

Polymethylmethacrylate (PMMA) was initially used as a filler in association with collagen. A previous test was mandatory to rule out allergy to collagen.^{1,2} In the last ten years, PMMA has been used without collagen, a situation that does not require a preliminary test.

In a recent study, we have evaluated the clinical results of PMMA application in different localizations in the face in 132 patients treated between 1999 and 2005 in Hospital Aliança in Salvador (Brazil). We performed a clinical retrospective study in which main indications of the technique were lipodistrophy associated to HIV, weight loss, aging, local trauma, and volumetric reposition in deep folds and wrinkles. Local topical anesthesia or regional block was performed and then a 30% PMMA gel (Biomedical, Rio de Janeiro, Brazil) was applied in the subcutaneous fat by means of retroinjection. Molding of the filler was achieved with the fingers.

We have used this filler to treat volumetric depletion in the nasolabial fold, chin, malar, temporal, and mandibular regions. We have also used this technique to improve the nasal dorsum and to elevate the tip of the nose. One or more regions were treated in the same patient and session. Number of sessions varied between one and four. Applied volume varied between 1 and 8 ml per treatment session, and the total filler volume ranged between 1 and 24 ml. Average follow-up was 22.1 months (range: 0.1 to 68.7 months). Satisfaction index was "very satisfied" (29%), "satisfied" (65%) and "unsatisfied" (6%).

CORRESPONDENCIA:

Dr. Osvaldo De Pretto. Av. Juracy Magalhães Jr 2096, Sala 301
Salvador (Bahia). Brazil CEP 41940-060

We observed only minimal and transitory side effects: edema (9%), echimosis (2%), and urticaria (2%). No infection, granulomas or extrusion/migration were observed so far.

PMMA is a relatively new filler with a good safety profile that gives satisfactory results in 94% of the patients. Moreover, it has a low incidence of side effects.



Figure 1. (A) Clinical aspect before treatment: observe redundancy of nasolabial fold due to fat depletion in the malar region after weight loss. (B) Post-treatment result: after one year and two sessions of pmma injection. It was applied 2 ml per treatment session, and a total filler volume of 4 ml.



Figure 2. (A) Pre-treatment: Observe the 80° angle between the columella and the lip. (B) Post-treatment: This angle can be easily modified to a 100° angle, a maneuver that elevates the tip of the nose. In this case, it was applied 1 ml of PMMA per treatment session for a total filler volume of 2 ml after two sessions (6 month follow-up).

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