# Innovative approach for tear trough deformity correction using higher G prime fillers for safe, efficacious, and long-lasting results: A prospective interventional study

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This study aimed compare and evaluate the standard technique of tear trough deformity correction with the lateral injection technique using a high G prime filler to establish a guideline for the safe and effective correction of tear trough deformity.

#### **Inclusion Criteria:**

Male and Female patients in the age group of 35-60 years. Patients with well-defined class II tear trough bilaterally, with pigmented skin

#### **Exclusion Criteria:**

Patients with large over-hanging lower lid fat pads and extremely wrinkled skin. Individuals with soft tissue filler done in the infraorbital area.

#### Hypothesis for the study:

Injecting laterally would not only lead to lesser side effects but the high G prime filler would also lead to long lasting effect.

#### **Materials and Methods:**

A prospective, double-blind, study was carried out from Dec 2017 to Dec 2019. Individuals between the age group of 35-60 years were selected for the study. A total of 30 participants were selected and divided into 2 parts.

### Group A conventional technique using medial injections with

Group B a lateral injection technique with a high G Prime filler a low G Prime filler

# Technique:

Group A-Mauricio de Maio's 3-point tear trough reshape technique

1.2 ml of a low G Prime filler injected using a 30-gauge needle, deep to the

The needle was inserted from the most lateral extent of the tear trough, 2-3mm elevation performed

Group B-Lateral injection technique

3 points marked at bony eminences of the orbital wall, the malar area, and the zygoma.

The needle was directed perpendicular to the bone and the filler was then deposited, while gradually withdrawing the needle.



**Before** 



After

Before and after pictures with Mauricio de Maio's 3-point tear trough reshaping technique



**Before** 



After

Before and after pictures of patient 1 with lateral injection technique

## **Efficacy measurements:**

Standardized photography documentation was done at the baseline, at the end of procedure, after 3 months, 12 months, and at the end of 2 years

Independent clinical assessment of the face was done by three blinded surgeons, who were asked to compare the left and right side of the patients face on the photograph.

The assessment criteria for the surgeon injecting the filler included the amount of filler injected. For the patients, self-satisfactory assessment scale (0-5) was employed.

#### Results:

Lateral injection technique required lower volume of filler as compared to Mauricio de Maio's 3-point technique.

The low G Prime filler lasted for mean of 9 months as compared to high G Prime filler results lasted for mean of 18 months.

# Complications:

The post-operative complications including erythema, swelling, bruising, and Tyndall effect were much higher using the standard technique for the correction tear trough deformity as compared to lateral injection technique.