

**A Comparative Study Between Alar Reduction
Versus Combined Alar Reduction-Sill Excision
For the Treatment of Alar Flare**

By

Islam Mohamed Magdy Mahmoud

M.B., B.Ch\M.Sc

Thesis

Submitted for partial fulfillment of
The requirements of the MD Degree of
Otorhinolaryngology

Department of Otorhinolaryngology

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SUMMARY

Alar flaring occurs when the horizontal flare width extends beyond 1–2 mm from the intercanthal distance on each side. Whenever the distance between the two alar facial grooves exceeds the intercanthal distance, a wide nasal base exists. Alar flare reduction means decreasing the horizontal flare width and nasal base reduction means decreasing the nasal base width. Alar flaring can be corrected by different methods: external alar wedge resection, nostril sill excision, combined reduction the medial flap technique and cinching sutures. The historical shift from one technique to another one was only created to avoid complications of each technique not for the superiority of results upon each other as no study reviewed which method was the best in alar flare reduction. No study compared between alar wedge resection (either cutaneous surface of ala or both cutaneous and vestibular surface of ala) versus combined alar reduction and sill excision.

In this study our aim was to compare between alar reduction only versus combined alar reduction and sill excision in the treatment of alar flare and to assess the efficacy of both techniques subjectively and objectively as a first trial.

Our study is a comparative study including 60 patients suffering from alar flaring and they were divided into two homogenous independent studying groups (**A and B**).

-Group A: Thirty patients underwent alar reduction only. **-Group B:** Thirty patients underwent both alar reduction and nostril sill excision.

Assessment of the efficacy and the superiority of each technique was achieved subjectively and objectively. Subjective assessment was delivered using (ROE) questionnaire to evaluate patient self- satisfaction and the Visual Analog Scale (VAS) to assess scars postoperatively. Objective assessment was achieved with a direct physical assessment to detect specific measurements of specific distances {intercanthal distance, horizontal flare width, vertical flare width, nasal base width, nostril size, basal height, nasal length, sill size ,D1, D2 and D3} and compared the results preoperatively ,intraoperatively and postoperatively to test efficacy and superiority of both techniques upon each other in managing alar flaring and wide nasal base. We also measured nasal tip projection and nasal tip.

Regarding results, there was a statistically significant decrease in the horizontal flare width in both groups without significant difference between both groups. There was a statistically significant decrease in the nasal base width in both groups with a statistically significant difference between both groups with superiority to group (B). Regarding vertical flare assessment, there was a significant decrease in both groups with statistically significant difference between both groups with superiority to group (B). According to the longitudinal and horizontal nostril axes, there was a statistically significant decrease in both groups with significant difference between both groups with superiority to group A. There was a statistically significant decrease in the sill size in both groups with statistically significant difference between both groups with superiority to group (B). In our study, in Group A, the alar reduction alone accomplished a significant decrease in both D1 and D2, so this technique decreased the horizontal flare width and decreased the depth of the alar facial groove effectively. But in Group B, the combined technique accomplished a significant decrease in D1 and a significant increase in D2 {increasing D2 is associated with a bad aesthetic look despite decreasing horizontal flare width (decreasing D1) due to accentuation of the alar-facial groove}.

We concluded that nasal sill excision is not desired generally in the alar flare management as it increases the depth of the alar facial groove and makes it more accentuated; one exception is a patient with a wide nasal base width exceeding the intercanthal distance. The alar reduction alone is an effective technique in managing the excessive alar flaring.