

Eye Brow Thread Lift: The Fox Eyes Technique

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Abstract

Aim: To evaluate the trendy fox eye treatment by investigating the efficacy and longevity of different techniques for eyebrow lifting using PDO barbed threads.

Material and Methods: 40 female patients between 22 – 50 years of age had an eyebrow thread lift procedure under local anesthesia, all the patients were randomly divided into four groups, each group containing 10 patients. The first group had a fox eye using the traditional vectors starting from the eyebrow itself, the second group had the same approach in addition to vectors for vertical lift, the third group had vectors starting from the hairline, while the fourth group had a reverse vector approach. All preoperative measurements were recorded during the session, 2 weeks, 1 month & 3 months.

Results: All patients reported a high degree of satisfaction rate with the results of the procedure; however, this satisfaction didn't last as the results were temporary. All patients reported feelings of tension in the thread area in the first week after the treatment. Significant changes were observed in the NY distance immediately after the treatment till it returned to the baseline with almost a complete relapse at 1 month after treatment.

Conclusion: The fox eye procedure is a non-surgical intervention that offers an acceptable immediate eyebrow lift if done correctly, however the result of the procedure is of temporary duration despite the various techniques that can be applied. Neurotoxin injections prior to the procedure might help provide results with longer duration.

Key Words: Eye brow thread lift – Fox eyes – Thread lifting – Barbed threads – Facial threads – PDO threads – Eyebrow lift.

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Introduction

Eyebrows have a huge impact on eye beauty, where low brows can make the eyes look heavy, sad, and aged, on the other hand high brows reverses all the latter features [1,2]. Numerous procedures for eyebrow lifting have been advocated those of which involve surgical and non-surgical procedures, the latter includes neurotoxins, fillers, and threads [3-5]. Millennial patients tend to seek a special type of lift for their eyebrows where they focus on a lift for the tail of the eyebrows which is commonly known in the market as the fox / cat eyes. This procedure can be achieved using threads with or without neurotoxins & fillers, despite the immediate lift of this technique and the tremendous results achieved, the longevity of the procedure is somehow questionable.

Material and Methods

The present study included a sample of 40 white women aged 22-50 years who desired to have a fox eye thread lift treatment. Medical histories were taken for all patients, written informed consent was obtained for all patients explaining the full details regarding the procedure along with the side effects and possible complications. Full assessments were performed for the eyebrow position, muscle movement (frontalis and orbicularis oculi), asymmetry, skin quality and any previous eyebrow reshaping procedure using microblading or tattooing. All patients were randomly divided into four groups, each group contains 10 patients who were treated with a fox eye thread lift procedure using a different vector for lifting.

Preoperative measurements were taken at the time of the procedure which included the following, the vertical distance from the tail of the eyebrow to the lateral canthus (N distance), the vertical distance from the tail of the eyebrow to the hairline (Y distance) and measuring the vertical distance from the hairline to the lateral canthus (NY distance).

PDO cog threads® (60mm length) loaded on an 18 G 50 mm cannula were used for all patients (i- Thread, Healux Co., Ltd, Seoul, Republic of Korea), it is a bidirectional cog thread. All patients were anesthetized using Scandonest plain 3% anesthesia (Mepivacaine Hydrochloride 3% without vasoconstrictor), the anesthesia was injected along the vectors drawn for lifting in the form of subcutaneous serial punctures.

The first group of patients were treated as follows, two vectors of lifting parallel toward each other yet diverging were drawn from the tail of the eyebrow heading toward the temporal fossa into the hairline. As for the second group, the same vectors were applied in addition to another vector (vertical lift vector) which was drawn from the hairline heading toward the temporal fossa, this point was corresponding to a horizontal line drawn from the lateral canthus till the line meets the hair line. The third group was treated by vectors drawn from the hairline heading toward the scalp, the fourth group had a reverse vector technique, where the vectors were drawn from inside the scalp 1cm from the hairline heading toward the tail of the eyebrow. So the entry points differed according to each group, in the first group; it was made right at the eyebrow, in the second group; at the eyebrow and at the hairline, in the third group; at the hairline itself as for the fourth group; the entry points were made at the scalp. (Fig. 1).

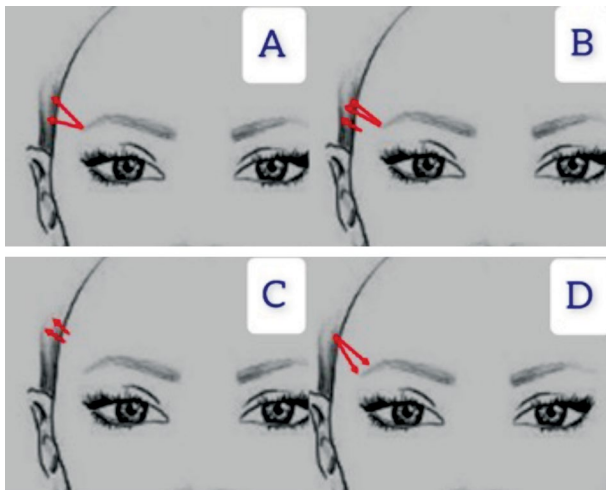


Fig. (1): (A): Diagram showing the direction of the threads for patients in group 1, (B): Diagram showing the direction of the threads for patients in group 2, (C): Diagram showing the direction of the threads for patients in group 3, (D): Diagram showing the direction of the threads for patients in group 4.

The procedure was performed by making an entry point using a pilot needle, followed by introducing the cannula loaded with the PDO barbed thread into the opening, screwing the cannula to

ensure that the barbs hold on to the tissue and provide a good anchorage, sliding the cannula smoothly while screwing till reaching the end point. After reaching the end point, the skin is molded onto the cannula at the opposite direction of insertion, followed by removal of the cannula leaving the thread in the proper plane. Part of the thread that remained outside of the skin where either cut using sterilized surgical scissors, tied into a knot or reintroduced into the entry point by embedding it beneath the tissue using the cannula, the later steps were adjusted accordingly according to the case. All threads were inserted into a deep subcutaneous plan, however redirecting into a deeper plan while heading toward the temple was performed because of the underlying anatomy.

All patients were instructed to avoid the following instructions for one week at least; sleeping on their sides, massaging, or touching the area of treatment, firmly brushing their hair, they were also instructed to avoid washing the upper third of the face or putting make up at least for the first 12 hours. Additional instructions included taking an antibiotic (augmentin 1gm) at the same session of treatment and for 5 days after in addition to applying warm compressions only in case of any hematoma.

Results

Fourteen patients aged between 22-50 years of age were treated. Of the total patients, 70% reported moderate pain at the time of anesthesia injection with complete comfort after the anesthetic effect started before performing the thread lift procedure, 30% reported comfort during the anesthesia injection, however in all cases slight pain, regain of sensation was noticed in most of the cases during advancement of the preloaded cannula with thread beyond the hairline. Bruising was observed in 20% of the patients at the entry point near the tail of the eyebrow which settled down after 5 days, there were no cases of thread migration, visibility, or migration. All patients reported a high degree of satisfaction for up to one month only based on a verbal survey.

All patients were followed-up at 2 weeks, 1 month and 3 months after the procedure. Postoperative measurements were recorded for the NY distance among different groups, variation in the previously mentioned measurements was observed in the form of a marked increase in the N distance with a significant decrease in the NY distance immediately after the fox eye procedure. This was maintained up to 2 weeks follow-up, however at 1 month follow-up all the previously mentioned measurements returned to baseline with almost complete relapse. (Figs. 2-7) (Table 1).

Table (1): One way Anova evaluating effect of time on NY distance in all groups.

Inter-labial Gap	Group 1		Group 2		Group 3		Group 4	
	Mean	St Dev	Mean	St Dev	Mean	St Dev	Mean	St Dev
Preoperative	19.08	3.12	15.55	0.97	15.55	0.97	18.52	1.77
2 weeks	11.19	2.71	7.6	0.87	9.26	1.25	13.35	1.22
1 month	19.08	3.12	14.55	0.9	15.55	0.97	18.52	1.77
F ratio	5.758		25.239		25.239		5.758	
Probability	0.003*		0.0000		0.0000		0.013	
LSD	3.783		4.691		1.360		3.783	

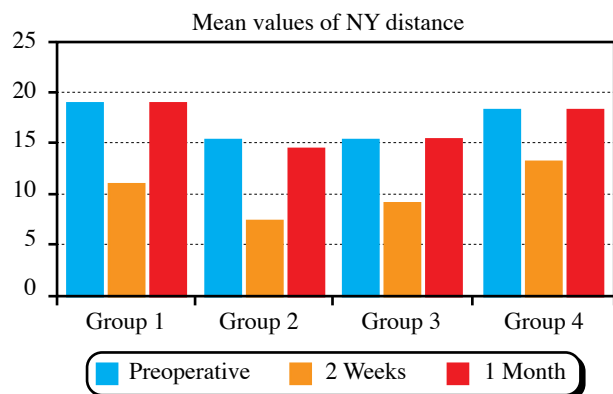


Fig. (2): Mean values of NY distance in all groups through out the follow-up period.

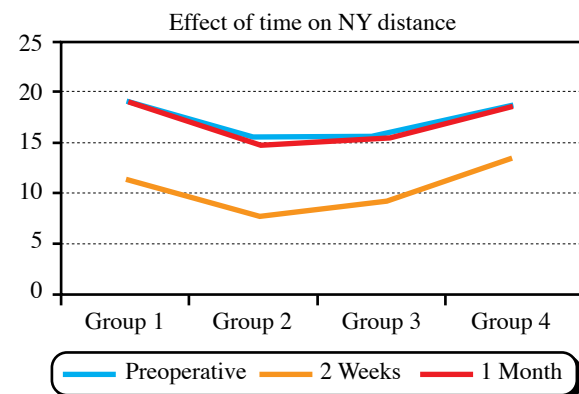


Fig. (3): Effect of time on NY distance in all groups through out the follow-up period.



Fig. (4): (A) Before & (B) After picture (immediately after the procedure) for a patient from group 1.



Fig. (5): (A) Before & (B) After picture (immediately after the procedure) for a patient from group 2.



Fig. (6): (A) Before & (B) After picture (immediately after the procedure) for a patient from group 3.



Fig. (7): (A) Before & (B) After picture (immediately after the procedure) for a patient from group 4.

Discussion

In aesthetic medicine there are always growing trends and new treatments provided in our daily aesthetic practice, those trends arise either due to patients needs or the effect of social media and celebrities on how patients' perception of beauty. Fox eye or cat eye technique is a common term to describe the use of barbed threads to lift the eyebrow to improve the gaze of the patient [6,7]. In our study we evaluated four different techniques for eyebrow lifting, we didn't notice any major or minor complications with the procedure, all of the patients were satisfied with the results of the procedure as it achieved what they wanted however this satisfaction didn't last because of the high relapse rate. The relapse could be attributed to the muscle activity or the type of threads used in this study which was polydioxanone.

However we strongly believe that the high relapse rate is caused by the muscle activity of the frontalis, orbicularis oculi and to an extent the temporalis muscle [8,9]. The stresses caused by the action of those muscles might contribute to the disengagement of the threads and the possibility of not providing a long term effect. According to this assumption we also believe that injecting neurotoxins 3 weeks before the thread lift procedure might aid in providing a stable results [10]. It is worth mentioning that patients who exhibit eyebrow ptosis due to volume loss are not good candidates for threads unless treated first with hyaluronic acid fillers, at least 3 weeks before the thread lift procedure, the use of hyaluronic acid fillers will provide a synergism effect to the thread as it will attract water so might slow down the hydrolysis of the barbed threads which eventually will provide a more stable results [11]. The findings in this study showed that the Fox eye technique is not a promising technique for eyebrow thread lifting due to its high relapse rate, the patients were impressed with the results that was achieved immediately after the results but was then disappointed with the return of the eyebrow to its original shape and curvature at 1 month interval.

One of the limitations of our study is the small sample size, not using software analysis and the use of PDO threads, so we strongly recommend further studies to have more evidence based data along with testing other types of threads that are supposed to last longer than PDO such as polylactic acid threads [12] or polycaprolactone [13].

Conclusion:

Eye brow thread lift using barbed threads might provide acceptable results for patients seeking the fox eye trend, however the result of this technique is of temporary duration despite the various modifications that can be performed. We strongly believe that injecting neurotoxins before the procedure might help in providing more stable results.

References

- 1- Benslimane F., van Harpen L., Myers S.R., Ingallina F. and Ghanem A.M.: The Benslimane's artistic model for females' gaze beauty: An original assessment tool. *Aesth. Plast. Surg.*, 41 (1): 81-89, 2017.
- 2- Pessa J.E.: An algorithm of facial aging: Verification of Lambros's theory by three-dimensional stereolithography, with reference to the pathogenesis of midfacial aging, scleral show, and the lateral suborbital trough deformity. *Plast. Reconstr. Surg.*, 106 (2): 479-488, 2000.
- 3- de Maio M., Swift A., Signorini M. and Fagien S.: Facial assessment and injection guide for botulinum toxin and injectable hyaluronic acid fillers: Focus on the upper face. *Plast. Reconstr. Surg.*, 140 (2): 265e-276e, 2017.
- 4- Chi J.J.: Periorbital surgery. *Facial Plast. Surg. Clin. North Am.*, 24 (2): 107-117, 2016.
- 5- Santorelli A., Cerullo F., Cirillo P., Cavallini M. and Avvedimento S.: Mid-face reshaping using threads with bidirectional convergent barbs: A retrospective study. *J. Cosmet Dermatol.*, 20 (6): 1591-1597, 2021.
- 6- Santorelli A., Cirillo P., Fundarò S.P., Cavallini M., Salti G. and Avvedimento S.: Eyebrow lifting with barbed threads: A simple, safe, and effective ambulatory procedure. *J. Cosmet Dermatol.*, 22 (1): 140-145, 2023.
- 7- Kim H., Jung J., Choi S.W., Yun C.W. and Lee W.: Eyebrow lifting using multidirectional absorbable thread. *J. Cosmet Dermatol.*, 22 (10): 2780-2784, 2023.
- 8- Lam S.M.: Frontalis treatment with Botox. *Pearls and Pitfalls in Cosmetic Oculoplastic Surgery*. Springer, 320-321, 2008.
- 9- Jabbour S.F., Awaida C.J. and ElKhouri J.S., et al.: The impact of upper face botulinum toxin injections on eyebrow height and forehead lines: A randomized controlled trial and an algorithmic approach to forehead injection. *Plast. Reconstr. Surg.*, 142 (5): 1212-1217, 2018.
- 10- Yi K.H., Lee J.H., Kim G.Y., Yoon S.W., Oh W. and Kim H.J.: Novel Anatomical Proposal for Botulinum Neurotoxin Injection Targeting Lateral Canthal Rhytids. *Toxins (Basel)*, 14 (7): 462, 2022.
- 11- Goel A. and Rai K.: Non-surgical facelift-by PDO threads and dermal filler: A case report. *J. Cosmet Dermatol.*, 21 (10): 4241-4244, 2022.
- 12- Wong V.: The Science of Absorbable Poly(L-Lactide-Co-ε-Caprolactone) Threads for Soft Tissue Repositioning of the Face: An Evidence-Based Evaluation of Their Physical Properties and Clinical Application. *Clin. Cosmet Investig. Dermatol.*, 14: 45-54, 2021.
- 13- Cho S.W., Shin B.H., Heo C.Y. and Shim J.H.: Efficacy study of the new polycaprolactone thread compared with other commercialized threads in a murine model. *J. Cosmet Dermatol.*, 20 (9): 2743-2749, 2021.