

Botulinum toxin and dermal filler treatment for facial deformity: an analysis of patient satisfaction

Dermal fillers and botulinum toxin are being increasingly used to treat facial deformities but are patients satisfied with the results?

BY MEERA CHAUHAN, IBRAZ SIDDIQUE AND RICARDO MOHAMMED-ALI

Dermal fillers and botulinum toxin are being increasingly used to treat facial deformities but are patients satisfied with the results?

Facial deformity can result in low confidence and self-esteem amongst patients due to cosmetic and functional difficulties [1]. There is a large range of deformities associated with the face which emphasises the importance of classifying the degree of deformity in order for the clinician to address a patient's concerns. Patients and clinicians should be in concordance with respect to what they regard as the patient's facial deformity. For the purpose of this paper, facial deformity includes any functional or aesthetic abnormality to include asymmetry and unusual facial proportions.

Facial reconstruction forms an important part of maxillofacial surgeons' workload and historically involved surgical techniques to restore function and aesthetics [2]. The range of options available to patients to treat facial deformity is rapidly expanding with injections of botulinum toxin and hyaluronic acid (HA) becoming an increasingly recognised and well received choice. Along with the potential of creating excellent aesthetic results using a minimally invasive approach, patients receiving facial botulinum toxin and dermal filler injections largely experience minimal postoperative complications [3].

Due to increasing public awareness and utilisation of botulinum toxin and dermal filler treatments, it is appropriate

to evaluate patient satisfaction of this treatment. A patient satisfaction survey allows clinicians an objective evaluation of their treatment and recognition of areas of service requiring particular or further attention [4].

Although high patient satisfaction has been reported for botulinum toxin and hyaluronic acid fillers [5,6], psychological well-being has only been reported for cosmetic outcomes.

This article focuses upon patients with facial deformity resulting from post trauma or post oncological resective treatment. Patients who had been treated for deformities such as mid face hollowing were the most receptive to our interview questions. We assessed patients with a focus upon the ageing face as this can also contribute significantly to their psychological well-being [7,8].

Methodology

Fifty patients who had received botulinum toxin and / or filler treatment due to facial deformity were randomly selected from a retrospective time period of five years (1 January 2009 – 31 December 2014). The computerised theatre operation coding system was used for case identification and selection. All cases had mild to moderate facial deformity and were treated at the Royal Hallamshire Hospital in Sheffield, UK by two oral and maxillofacial consultants. All selected cases had injections of botulinum toxin or hyaluronic acid filler, or a combination of both.

Patients were interviewed using a semi-structured 10-point questionnaire.

The first eight questions focused upon patient satisfaction regarding specific aspects of the service they received. The final two questions were related to complications associated with the treatment and the change in patient perception regarding their facial deformity. Patients were invited to select one of five options to each question: "very satisfied", "satisfied", "acceptable", "slightly dissatisfied" or "very dissatisfied". Patients who selected "very satisfied", "satisfied" or "acceptable", were considered to be satisfied with their treatment. Patients who selected either "slightly dissatisfied" or "very dissatisfied", were considered to be not satisfied with their treatment. A free text section was available at the end of the questionnaire for patients to offer further comments.

The majority of questions focused on the quality of care throughout their treatment and whether this non-invasive method had provided them with increased confidence compared to pre-treatment levels.

Patients were interviewed by telephone at least six months postoperatively to ensure that they could comment upon the psychological impact of the treatment they had received and whether they had noticed a change in perception regarding their facial deformity. Furthermore, this also allowed time for patients to notice and report upon any postoperative complications. All patients were new to any facial filler or botulinum toxin treatment and had not undergone any surgery to correct the deformity in

"Botox treatment for facial deformity improves self-esteem in 98% of patients"

question prior to having botulinum toxin or filler treatment.

We aimed to evaluate how satisfied our patients were following injections of botulinum toxin and hyaluronic acid to aid any aspect of facial deformity.

Results

The majority of patients (96.6%) were satisfied with their treatment. The following is an analysis of responses to each question.

Question 1:

"All my questions were fully answered before my treatment commenced." Ninety-eight percent of patients were satisfied which suggests patients were well informed and did not misunderstand any aspect of treatment before commencing with injections.

Question 2:

"It was explained fully what to expect at the end of the treatment."

This targeted what patients understood as the final outcome of their treatment and aimed to ensure that patients were not misled into overestimating the final result. This question scored 100% for patient satisfaction suggesting patients were satisfied with the treatment meeting their expectations.

Question 3:

"The possible risks and side-effects were clearly explained to me."

Although difficult to distinguish side-effects from common postoperative effects, it is worthwhile evaluating this to ensure patients are well informed of what to expect after the procedure. Ninety-eight percent of patients offered a satisfactory response.

Questions 4, 5 and 6:

- "Sufficient time was provided for me to decide whether to have the treatment"
- "The treatment was provided to me with care and dignity."
- "I felt confident in the surgeon during my procedure"

All three of these questions scored 100% for patient satisfaction (very satisfied, satisfied or acceptable). This is indicative of the level of patient management and time taken with each patient to ensure they did not feel pressurised or coerced into making any decision about the treatment.

Question 7 and 10:

- "The treatment has improved my confidence and self esteem"
- "Would you say that you've noted a younger appearance following botox and / or filler injections?"

These questions aimed to identify whether treatment had a psychological impact on patients cosmetically. They scored 98% and 82% satisfaction respectively. These are high scores and is indicative of the level of impact these treatments can have.

Question 8:

"Clear after-care instructions were provided."

Ninety-six percent of patients were satisfied with the aftercare instructions provided to them. Although high, this could still be improved. Of those that were dissatisfied (4%), they reported not remembering all the information given and were unsure about whether they could continue as normal postoperatively. However, this group of dissatisfied patients had no problems after their second treatment.

Question 9:

"Did you experience any complications after your treatment such as swelling, bruising or unexpected weakness in or around your face?"

Ninety-four percent of patients were satisfied postoperatively suggesting they had no complications. Six percent of dissatisfied patients suffered only swelling and / or bruising. There were no reports of facial muscle weakness.

Discussion

Overall, patients reported being well informed. Four percent of patients were dissatisfied with the aftercare instructions they were provided with. Currently these are provided verbally by the clinician who provided the treatment. We would suggest reinforcing this information with written material. One hundred percent of patients were satisfied when questioned about the quality of their care and how confident they felt in the surgeon providing their care. However, unexpectedly, patients who were not entirely confident in the surgeon still proceeded with treatment and were very satisfied.

Satisfaction only fell below 90% when patients were asked about whether they had felt they looked younger as a result

of the treatment. Two of these patients were unsure, however, 82% were very satisfied with their appearance and had noticed an improvement. Age perception is highly subjective and depends on each individual, therefore this result may not be reliable between patients. It should also be noted that these patients were questioned after six months at which point they may not recall immediate improvements.

A number of factors could account for the low rate of dissatisfaction (3.4%). Firstly, all patients were questioned by a member of the department and patients may not have been confident in answering truthfully in an attempt to seem dissatisfied or ungrateful. Surveying patients after a certain period of time by a different member of the team may allow patients to voice their opinions more objectively with additional time to reflect upon their treatment and the overall impact this has had. Secondly, immediate post-treatment optimal effects of botulinum toxin may have begun to wear off in the months following treatment and patients usually require further treatments to maintain a satisfactory result. The majority (85%) of the patients received more than one treatment, however, if they had received only one cycle of treatment they may have found themselves dissatisfied once the effect of the injections had worn off. Finally, patient expectation can be a challenging factor when assessing patient satisfaction. For example, patients who believed they would suffer no postoperative complications may have been surprised about the common side-effects they had experienced. This is in contrast to patients who expected postoperative bruising and swelling and therefore reported being very satisfied. However, it should be noted that of the patients who did suffer side-effects (6%), these all settled within two to three days and 85% of patients continued to have further treatments in the same area.

Our findings suggest that botulinum toxin and fillers are well received and provide excellent results. This directly implicates onto psychological well-being and an improvement in patient confidence [9,10]. Furthermore, it highlights the importance of patient management and a surgeon's approach to providing patients with the options of these treatments.

This study provides insight into excellent patient satisfaction within a growing field of treating facial deformity. Therefore, it is important for this subject to be thoroughly explored

and clinicians to be well informed about these potential treatments. By appreciating these treating modalities, a surgeon can gain better patient satisfaction with surgical results.

Further studies could categorise facial deformity to explore which areas are most difficult to treat and where expectations compared with reality becomes problematic. Furthermore, injections of botulinum toxin are being used to treat temporomandibular disorders, however, there is limited research into whether this is proving worthwhile. Although this is not a deformity as such, it impacts directly on self-confidence.

Conclusion

The majority of patients (96.6%) were satisfied with their treatment. As a growing field which is providing an excellent alternative to surgery, it is valuable to evaluate patient satisfaction of facial fillers and botulinum toxin injections to correct facial deformity. This will provide improvements to service provision and patient satisfaction and acts as a tool for total service quality improvement.

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TAKE HOME MESSAGE

- 96.6% of patients were satisfied with botulinum toxin or dermal filler treatment.
- Patients who were not confident with the surgeon still proceeded to treatment.
- Lack of aftercare instructions was the main reason for patient dissatisfaction.
- 85% of the patients received more than one treatment.
- Evaluating patient satisfaction outcomes for non-surgical facial deformity correction will serve as a tool for service quality improvement.



Miss Meera Chauhan,

Dental Core Trainee (DCT) 1, Charles Clifford and Royal Hallamshire Hospital, Sheffield, UK.

E: meera_m67@hotmail.com



Mr Ibraiz Siddique,

Specialty Registrar in Oral and Maxillofacial Surgery, the Royal Hallamshire Hospital, Sheffield, UK.



Mr Ricardo Mohammed-Ali,

Consultant Oral & Maxillofacial Surgeon Sheffield Teaching Hospitals; Honorary Senior Clinical Lecturer; University of Sheffield, UK.

Declaration of competing interests: None declared.