ABSTRACT

Objective: Body dysmorphic disorder, narcissistic personality disorder, and histrionic personality disorders are the most frequent personality disorders in patients seeking cosmetic interventions. Botulinum toxin type A (BoNT A) injection for cosmetic purpose is the most popular among non-surgical cosmetic procedures and is also the second common aesthetic treatment in Iran. The current study aimed to assess personality disorders in people who were referred for BoNT A injection in Ardabil, Iran. To the best of our knowledge, this is the first study on personality disorders in applicants for cosmetic BoNT A injection in Iran.

Materials and Methods: In a descriptive cross-sectional study, 200 eligible applicants for cosmetic BoNT A injection were selected by non-probability sampling. Firstly, the participants’ demographic data were recorded in data gathering forms. Then their personality characteristics were evaluated via the Milton Clinical Multiaxial Inventory 3rd edition, which is a standardized self-report questionnaire for the assessment of personality disorders and clinical syndromes.

Results: Narcissistic personality trait was the most common (34.5%) followed by histrionic personality trait (27%), and obsessive personality trait was the least common personality trait (4%) in patients seeking BoNT A injection. Anxiety disorder had the highest frequency of clinical syndromes (46%) among the participants in this study, somatization had 25.5%, and dysthymia had the lowest frequency (11%).

Conclusion: The current study concluded that narcissistic and histrionic personality traits and anxiety and somatization symptoms are higher in applicants for cosmetic BoNT A injection.

Keywords: Botulinum toxins, type A, surgery, plastic, personality disorders

Introduction

Study on correlation between cosmetic procedures and psychological problems in patients has increased in the recent years because of a markable increase in such procedures worldwide [1]. Results of various studies have shown that dissatisfaction with body image, low self-esteem, insecurity, and embarrassment in some women leads to more people seeking cosmetic procedures [2].

Although body image dissatisfaction is the main motivation for aesthetic surgeries, it seems that media figures and television shows are very effective in popularizing such treatments [1-2]. From 2005 to 2006, cosmetic interventions have increased to 34% in the United States (US), and these increases are mainly correlated to non-surgical cosmetic procedures, such as botulinum toxin type A (BoNT A) injection, lipotransfer, dermal fillers injection [1].

According to American Society for Aesthetic Plastic Surgery, in 2012, an increase of 300% was observed in surgical and non-surgical cosmetic treatments [3]. In the past seven years, an increase in suicide risk has also been reported in women who underwent breast augmentation surgery in the US. The prevalence of body dysmorphic disorder (BDD) is about 1% in general population, but results of several studies revealed that BDD is more common among patients who seek cosmetic surgery with a prevalence rate of 7%–15% [1].

Body dysmorphic disorder, narcissistic personality disorder, and histrionic personality disorders have been reported in many studies as the most frequent personality disorders in patients seeking cosmetic interventions [3-6]. Also, results of various researches have revealed that anxiety...
Such fast-growing popularity of aesthetic cosmetic surgeries has increased in Iran as well. People who were referred for BoNT A injection and reports of several studies about disorders in Iran [12], the aim of this study increase in the prevalence of psychological interventions in Iran has ranked it, along with Brazil have the highest rate of cosmetic procedures in Iran, and written informed consents were obtained from all participants before the study.

At first, demographic data, including gender, age, education, marital status, and occupation, of the participants were recorded in data gathering forms. Then, the patients' personality characteristics were evaluated via the Milton Clinical Multiaxial Inventory 3rd edition (MCMI-III), which is a standardized self-report questionnaire for the assessment of personality disorders and clinical syndromes. MCMI-III includes 175 true/false questions, which require 25 to 30 min to complete. This questionnaire has 27 scales including 14 clinical personality scales, 10 clinical syndrome scales, and three correction scales [5, 12].

According to the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-VI), personality disorders are divided into three groups: group A (paranoid, schizoid, and schizotypal), group B (antisocial, borderline, histrionic, and narcissistic), and group C (avoidant, dependent, and obsessive-compulsive).

There are 14 personality disorder scales in MCMI-III, which include: 1, schizoid; 2A, avoidant; 2B, depressive; 3, dependent; 4, histrionic; 5, narcissistic; 6A: antisocial; 6B, aggressive (sadistic); 7, compulsive; 8A, passive-aggressive (negrivistic); 8B, masochistic and severe personality disorders (Schizotypal); 8C, borderline; and P, paranoid.

The 10 clinical syndromes include: A (anxiety), H (somatoform), N (bipolar, manic), D (dysthymia), B (alcohol dependence), T (drug dependence), R (post-traumatic stress disorder) and severe clinical syndromes: S5 (thought disorder), CC (major depression), and PP (delusional disorder).

Scoring system in MCMI-III is as follows:

Base rate score of 60 (BR60) indicates the median score. BR0 is the lowest and BR115 is the highest possible score.

For personality disorders: BR 70–74 (having some personality traits), BR 75–84 (having clinically significant personality traits), and BR≥85 and above (personality disorder).

For clinical syndromes: BR 60–74 (having some symptoms of clinical syndrome), BR 75–84 (having a syndrome), BR≥85 (prominent clinical syndrome).

In the current study, the Farsi version of MCMI-III was used, the validity of which has been assessed in several studies in Iran and reported as a validated and accurate diagnostic tool for the assessment of personality disorders.

The positive predictive power of MCMI-III has been reported to be between 0.92 and 0.97, and the negative predictive power between 0.93 and 0.99 [4, 11].

Statistical Analysis

After completing both the data gathering forms and the MCMI-III questionnaires for all participants, collected data were analyzed using Statistical Package for Social Sciences (SPSS) version 21 (IBM, SPSS Corp.; Armonk, NY, USA) for Windows. Descriptive analysis was conducted using mean and standard deviation for quantitative variables and frequency and percentage for qualitative variables.

Results

Of the 200 participants, 74% (n=148) were females and 26% (n=52) were males. The mean age of the patients was 43.28±7.39 years (range: 29–58 years). About 58.5% (n=117) of participants were single and 41.5% (n=83) were married. Also, 28% (n=56) did not have a high school diploma, 37.5% (n=75) had a high school diploma, and 34.5% (n=69) were university graduates.

Nearly 43% of our subjects (n=86) were employed and 57% (n=114) were unemployed or were housewives. Results of the current study showed that narcissistic personality trait was the most common personality trait (34.5%) followed by histrionic personality trait, and obsessive personality trait was the least common (4%) among patients seeking BoNTA injection (Figure 1).

As shown in Figure 2, anxiety disorder had the highest frequency of clinical syndromes (46%) among the participants in this study, somatization was 25.5% and dysthymia had the lowest frequency (11%).

Discussion

The results of the current study revealed that the most common personality trait in patients seeking BoNTA injection is narcissism, which was reported in 34.5% of the participants. Zojaji et al. [5] also reported narcissism as the most
common personality trait in patients seeking cosmetic rhinoplasty (26.7%), which is close to our results. Gazize et al. [4] reported the same result in applicants for cosmetic surgeries. According to a systemic review by Shridharani et al. [13], narcissism was also the most common personality disorder in patients undergoing cosmetic plastic surgeries.

Higher frequency of narcissistic disorders among individuals who seek cosmetic procedures is predictable because such patients like to be the center of attention and more beautiful than others which can be achieved by a cosmetic surgery in their opinion.

Histrionic was the second most common personality trait (27%) in our participants. Shridharani et al. [13] reported histrionic disorder as the second common personality disorder in applicants for cosmetic surgeries which is the same as our results.

Our findings are close to the results of Zojaji et al. [5] study (histrionic trait: 10%), although sample sizes are different (200 vs. 30). Findings of Gazize et al. [4], Mulkens et al. [6], and Malik et al. [15] also showed that histrionic personality disorder is more common in people seeking cosmetic procedures than in normal population.

Patients with histrionic personality disorder need more attention than the others, like to be seductive, and have more tendencies toward aesthetic surgeries.

Dependent personality trait was ranked the third common personality trait (18%) in the current study, which is the same as what is reported in studies conducted by Zojaji et al. [5] and Gazize et al. [4]. Depressive personality trait (8.5%) was the fourth personality trait observed in our participants, which is consistent with the results reported by Zojaji et al. [5]. In the present study, obsessive personality trait (4%) was the least common among individuals referred for BoNT A injection. Gazize et al. [4] demonstrated that obsessive-compulsive personality disorder is the third common personality disorder in applicants for cosmetic surgeries, which is inconsistent with our results. This difference may be due to different study designs (descriptive vs. case-control), sample size (200 vs. 62), and questionnaires. In this study, we only used MCMI-III, but Gazize et al. [4] used Symptom Checklist-90-R (SCL-90-R) questionnaire and physical self-description questionnaire as well.

Kucur et al. [3] concluded that compared with controls, patients who seek rhinoplasty have higher scores of avoidant traits, but we did not report avoidant trait in our participants. This huge difference in results may be due to difference in sample sizes (75 vs. 200), study designs (case-control vs. descriptive), assessment tools (Hospital Anxiety and Depression Scale, Liebowitz Social Anxiety Scale, Quality of Life Scale Short Form, and Rosenberg Self-Esteem Scale vs. MCMI-III), and cosmetic procedures (rhinoplasty vs. BoNT A injection).

Borderline personality trait was the least frequent trait in the study conducted by Gazize et al. [4], but we did not find any borderline trait among our subjects. Anxiety was the most common clinical syndrome (46%) among individuals seeking BoNT A injection in the current study, which is consistent with the reports reported in the studies conducted by Gazize et al. [4], Javanbakht et al. [15], and Carter Singh et al. [7].

Somatization was the second common clinical syndrome in our participants. Gazize et al. [4] reported that somatization is more frequent in candidates for cosmetic procedures than in non-candidates, which is close to our results. Zahiroddin et al. [16] reported that depression, anxiety, and somatization are less common in patients seeking rhinoplasty than in controls, which is completely different from abovementioned findings. Their study used two different assessment tools (General Health Questionnaire-28 and Roger’s Self-Concept questionnaire), which could have caused these differential results [16].

Dysthymia was the least common clinical syndrome in applicants for BoNT A injection in our study.

Our study had limitations like descriptive design instead of case-control design and use of only
one assessment tool (MCMI-III) which is less accurate in detecting obsessive-compulsive personality disorder. The lack of a psychiatrist in our research team for the assessment of personality traits and clinical syndromes was another limitation of our study.

To the best of our knowledge, the present study is the first study on the prevalence of personality disorders among individuals seeking BoNT A injection for cosmetic purposes in Iran and probably one of the first studies that assesses personality disorders in applicants for aesthetic BoNT A injection in literature.

This study concluded that narcissistic and histrionic personality traits and anxiety and somatization symptoms are higher among individuals seeking cosmetic BoNT A injection, which is consistent with the results of several previous studies on patients seeking different cosmetic interventions. Based on the MCMI-III questioner scores we did not detect personality disorders in our participants, we just detected personality traits and clinical syndromes.

More studies concentrating solely on personality disorders in aesthetic BoNT A injection applicants using a combination of personality assessment tools are suggested.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Islamic Azad University, Ardabil Branch, Iran.

Informed Consent: Written informed consents were obtained from all participants before the study.

Peer-review: Externally peer-reviewed.


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