High Prevalence of Rhinoplasty in Patients with Multiple Sclerosis a Report from Iran

Fattahi MR[1,3], Iranmehr A[2], Abbasi N[3], Hemmati Z[4] and Sahraian MA[3]*

[1]Department of Surgery, Tehran University of Medical Sciences, Iran

[2]Department of Neurological Surgery, Imam Khomeini Hospital Complex, Tehran University of Medical Sciences, Iran

[3]Multiple Sclerosis Research Center, Neuroscience Institute, Tehran University of Medical Sciences, Iran

[4]School of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran

Abstract

Background: In Iran, cosmetic operations, particularly rhinoplasty, are becoming more popular among individuals with Multiple Sclerosis.

Methods: Between 2019 and 2021, we conducted a retrospective cross-sectional survey in a referral center for patients with Multiple Sclerosis.

Results: Cosmetic surgery was performed on 178 patients (18.2%) with MS. Rhinoplasty was the most prevalent procedure, with 121 individuals undergoing it (12.3%). In terms of the prevalence of all cosmetic surgery, there was no substantial variations between genders (*p*-value: 0.687).

Conclusion: Although MS patients are more willing to undertake aesthetic surgery, it was not possible to detect a real occurrence rate. Because of the time difference between this research and prior studies, we believe additional research involving diverse referral centers should be conducted before making a definitive conclusion.

Keywords: Cosmetic surgery, Rhinoplasty, Prevalence, Multiple Sclerosis

Introduction

There is an increasing trend in cosmetic surgeries, such as an elective operation, across the world. One of the highest cosmetic surgery rates, especially rhinoplasty, could be seen in Iran [1]. Several factors, such as gender, age, socioeconomic, and psychological factors, contribute to this prevalence. Evidence shows a higher rate of mental health disorders, specifically impaired body image and Body Dysmorphic Disorder (BDD), in those who underwent cosmetic surgery [2]. Multiple Sclerosis (MS) mainly presents with different levels of optic neuritis, sensory aberration, myelitis, and brainstem syndrome [3]. Mental health problems like depression, bipolar disorder, and impaired body image are also prevalent in patients with MS [4]. This survey aims to explore the prevalence of cosmetic surgery in patients affected with MS.

Methods

This cross-sectional study was conducted in a tertiary hospital (affiliated with Tehran University of Medical Sciences) on patients with MS. These patients came to the hospital's MS clinic between 2019 and 2021. Demographic data (Including age, sex, type, and disease duration) were registered in the patients' medical records by a resident physician and were extracted accordingly. We also retrieved the subjects' history of cosmetic surgeries. We used IBM SPSS to analyze the data. Continuous data were described as mean and Standard Deviation (SD). The Shapiro-Wilk test was used to assess the normality of the data. In the case of normal distribution, we used paired sample t-test to compare means; otherwise, we used a non-parametric Wilcoxon-signed rank test to seek the difference in medians. A *p*-value ≤ 0.05 was considered significant.

Results

Demographic data

Of 978 patients included in the study, 767 (78.4%) were female. The mean age was 37.04 (SD: 9.11) year-old. Women were significantly younger than men (*p*-value: 0.036). The mean age of

disease onset was 28.46 (SD: 8.64) year-old. As estimated, the disease symptoms appeared sooner in female patients (*p*-value <0.001). The most common type of MS was Relapsing-Remitting MS (RRMS), seen in 74.1% of patients, followed by secondary progressive (PPMS), primary progressive (SPMS) in 20.3%, and 5.5% of patients, respectively. The mean EDSS was 2.56 (SD: 1.80).

Cosmetic surgery was seen in 178 patients (18.2%) with MS. Rhinoplasty was the most common operation performed in 121 patients (12.3%). There was no significant difference between genders concerning the prevalence of all cosmetic surgery (*p*-value: 0.687). The mean age at the surgery was 29.06 (SD: 11.79) year-old. The surgeries were performed in a stable condition of MS and resulted in neither neurological nor surgical complications.

Discussion

Given the higher prevalence of body dysmorphic disorder in those who seek cosmetic surgery and its higher prevalence in patients with MS, we hypothesized that cosmetic surgeries might be more prevalent in patients with MS [2,4]. Our survey revealed that 18.2% of patients with MS in Iran underwent cosmetic surgeries (mostly rhinoplasty). The annual rhinoplasty rate was reported to be equal to 180:100000 in Iran in 2011 [1]. The US cosmetic surgery data bank of the aesthetic society said that in 2019, 1,469,752 aesthetic surgeries were performed, which comprises 39,692 nose surgeries [5]. Because of the scarcity of data, we could not calculate the exact incidence rate, but it seems that patients with MS are more eager to undergo cosmetic surgeries. We notice the time discrepancy between this research and previous studies. Therefore, we suggest performing prospective multi-center studies before reaching a solid conclusion.

Authors Contribution

Mohammad Reza Fattahi: Conceptualization, Data extraction and drafting, Arad Iranmehr: Statistical analysis, and interpretation of data, Naghmeh Abbasi & Zahra Hemmati: Data extraction and design, Mohammad Ali Sahraian: Design, supervision, final editing.

References

1. Sari AA, Babashahy S, Olyaeimanesh A, Rashidian A. Estimating the frequency and rate of first 50 common types of invasive procedures in Iran healthcare system. Iran J Public Health. 2012;41(10):60-4.

2. Mortada H, Seraj H, Bokhari A. Screening for body dysmorphic disorder among patients pursuing cosmetic surgeries in Saudi Arabia. Saudi Med J. 2020;41(10):1111-20.

3. McGinley MP, Goldschmidt CH, Rae-Grant AD. Diagnosis and treatment of multiple sclerosis: A review. JAMA. 2021;325(8):765-79.

4. Wilski M, Tasiemski T, Dąbrowski A. Body esteem among women with multiple sclerosis and its relationship with demographic, clinical and socio-psychological factors. Int J Behav Med. 2016;23(3):340-47.

5. The Aesthetic Society's Cosmetic Surgery National Data Bank: Statistics 2019. Aesthet Surg J. 2020;40(Suppl 1):1-26.