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Impact of Eye Prosthetic on State of Depression: A Literature Review

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ABSTRACT

Depression is a significant comorbid and a risk factor for mortality in the general population. There are many things that can affect someone's mental health thus rendering the said individual into contracting depression. One of these many things observed is the loss of one's eyes. It is hypothesized that self-esteem comes from how one perceive himself or herself and losing a dominant organ whose function is to be a media of interpersonal communication would mess someone's selfimage. This shattered image paved way to depression. Identifying certain risk factors and signs could help physician to better manage patients with loss of eyes especially those who are utilizing eye prosthesis.

1. Introduction

Each part making up the human physique has its own functional, aesthetical and essential values. Eyes are uniquely irreplaceable as our look is how people recognize our identity, and it is what people remember when specific individuals are absent. As time goes by and an individual develops a self-image based on their interaction with others, it, in turn, determines their self-esteem to a certain degree. Compared to other organs in the face, eyes are relatively dominant and crucial for interpersonal communication and function as a media to convey expression, understanding and other non-verbal communication. The loss of one's eyes, either by loss or disfigurement, forced the individual to look for a new self-image. Not only that, impaired vision, including reduced visual range and abnormal depth perception, is a problem that the individual must constantly face. External factors such as social pressure have a significant impact on the individual's mental well-being, and mucoid discharge from using prosthetic eyewear are some of the things complicating the patient's life and should be overcome.

The problems mentioned above could partially be solved by using an appropriate eye prosthesis. Most of the patients utilizing eye prostheses usually show an adequate level of satisfaction with their prostheses. Despite that fact, living with an ocular prosthesis significantly impacts psychosocial factors and social interactions.

Prosthetic eye wearers report significant psychological issues, such as depression. Pine et al. said that changes in appearance, ongoing problems with the eye socket's response to prosthetic eyewear, and impaired visual perception, were common sources of complaint about prosthetic eye wearers. Watering, crusting and discharge concerns prosthetic eye wearers more than any other factor besides the

health of the remaining eye, and in New Zealand, at least 90% of prosthetic eye wearers experience mucoid discharge (60% on a daily basis). In Germany, the incidence is 88% (65% on a daily basis). But while the loss of an eye is a shocking and traumatic event, it should be noted that negative feelings reduce significantly over time and that feeling of acceptance and happiness significantly Increase.

Depression

Depression is considered a frequent and complex condition. According to the World Health Organization, it is expected to be the third leading cause of disability worldwide by 2020. The lifetime prevalence of major depressive disorder (MDD) is estimated at around 2-20%. Common features of all depressive disorders include sad or irritable mood, accompanied by somatic and cognitive changes that significantly affect the individual's capacity to function. Overall, depression is characterized by a general feeling of sadness, anhedonia, avolition, worthlessness, and hopelessness. Cognitive and neurovegetative symptoms, such as difficulty concentrating, memory alterations, anorexia, and sleep disturbances, are also present. Various known risk factors for depression have been recorded in the literature: female gender, older age, poorer coping abilities, physical morbidity, impaired level of functioning, reduced cognition, and grief. Depression has been associated with an increased risk of mortality and poorer treatment outcomes in physical disorders.

Eye prosthetics and depression

The aetiology of eye loss did not significantly influence depression or stress in the experienced prosthetic eye wearers who participated in this study. Still, negative feelings are more intense for young people when they first lose their eyes, primarily through accidents. Participants were equally concerned about appearance, mucoid discharge and reduced depth perception and visual range. Still, concerns about appearance generated significant stress levels, while discharge and visual perception concerns generated substantial levels of stress.

Older participants in this study suffered significantly less depression and anxiety than younger participants, which is consistent with other studies that have found that while older people are often dissatisfied with their bodies, their outward appearance is less concerning. Their sense of identity and self-esteem is more established than it is for younger adults. Older participants felt more accepted by society and social groups, as did married participants who also suffered less depression and appearance anxiety, suggesting, together with other studies, that social support is essential for prosthetic eye wearers' psychological well being. The importance of social support is also reflected in the finding that participants who had problems with employment, leisure and social functioning were at higher risk of being depressed, stressed and not feeling accepted by society. Again, these findings were consistent with the results of other studies. Duration since eye loss was another critical factor influencing participants' psychological well-being, as found by Pine et al., who reported that almost all concerns with appearance, discharge, and appearance at the time of eye loss significantly reduce after at least two years. This implies that psychological help may be more urgent at the time of eye loss, but this study has demonstrated that a significant need exists for many experienced prosthetic eye wearers as well.

Overall, prosthetic eye wearers do not appear to suffer depression or stress more or less than the general population. For example, in the UK, the general population means for depression is 5.66 (SD 7.74) and stress 9.46 (SD 0.4). These means may be compared with the means of participants in this study (6.01 (SD 7.93) and 8.89 (SD 8.32), respectively). However, as found in other studies, a disproportionally high number of participants reported high or extremely high levels of depression, anxiety or stress. This issue is important as 37% of study participants (more than 2 of every 5 anophthalmic patients) were suffering elevated or extreme depression, anxiety, or stress levels. The data shows that socially isolated younger prosthetic eye wearers who have recently lost their eye and worry about their appearance are more likely to be

depressed than other anophthalmic patients. These patients are even more likely to be depressed if they do not have a partner to share their concerns with and have employment, recreational, and social functioning problems. Clinicians should recognize patients with these characteristics as potential depressives and provide them with psychological support as part of their overall treatment. While social settings are essential predictors for depression, anxiety and stress appear to derive more from concerns about appearance and practical issues associated with living with a prosthetic eye, such as reduced depth perception and visual range and coping with mucoid discharge from the eye socket. Prosthetic eye wearers who have problems with employment, leisure and social functioning are at higher risk of being depressed, anxious and stressed, and suffering appearance anxiety and not feeling accepted by society. Older patients and those who feel accepted by society appear to suffer less anxiety and stress. This study has demonstrated a link between social settings and depression and concerns about depth perception, visual range, appearance, and mucoid discharge with anxiety and stress. Two of every five anophthalmic patients are likely to be suffering elevated or extreme levels of depression, anxiety, or stress. It is recommended that psychologists be part of an integrated team approach to address their needs.

A study showed that of the 295 study participants, 20 patients (6.8%) had a prediagnosed depression, indicating that patients wearing prosthetic eyes have no higher incidence of depression than the general population. However, our screening results with PHQ-9 are in contrast to that and showed that 24.1% of these patients had significant depression symptoms. This suggests that there is a noticeable number of underdiagnosed patients. Since 51 of 71 symptomatic patients had only mild symptoms, psychological or pharmacological treatment is probably not necessary in every case. Still, these patients should be seen and individually counselled by a psychologist, and if necessary, treatment should be initiated.

A previous study with only 20 patients without long-term follow-up reported a higher incidence of depression symptoms, especially in the first months after enucleation in patients with uveal melanoma. Three months after enucleation due to uveal melanoma, 45% of these patients had mild depression, 25% moderate depression, and 10% severe depression symptoms. In our study, with a mean time of more than 30 years since eye loss, 17% of all prosthetic eye wearers had mild, 4% moderate, 2% moderately severe, and 0.3% severe depression scores. These results might indicate that depression symptoms seem to decrease over time. However, the study populations and methodology in both studies were very different. The results in this study had a much higher patient number and a long meantime since eye loss showed that time since eye loss had no statistical influence on depression symptoms.

Furthermore, a lower SF-12 PCS was associated with higher depression symptoms, confirming previous studies' results in general populations. Therefore, prosthetic eye wearers seem to need good ophthalmological and ocularists care and professional public healthcare to avoid depression symptoms. Non-traumatic eye loss was also associated with higher depression symptoms. A reason could be that patients with medical or congenital eye loss have a more extended disease history. This could lead to higher depression symptoms, but the exact reasons stay unclear, like the nature of why patients with a higher educational degree had higher depression symptoms. This finding is also in contrast to previous studies in general populations.

2. Conclusion

Depression disorders seem to be underdiagnosed in the prosthetic eye–wearing population. A standardized psychometric screening regarding these depression and anxiety disorders should be implemented in the routine of clinical care. For these patients' successful social and psychological rehabilitation, long-term, integrated care by a multidisciplinary team including ophthalmic plastic surgeons, ophthalmologists, ocularists, general practitioners, and psychologists is essential.

3. References

1. A. Pine NS, Pine KR. Depression, Anxiety and Stress Indicators for Prosthetic Eye Wearers. Clinical Ophthalmology. 2020; 14: 1715–1723.
2. C. Pine KR, Sloan BH, Jacobs RJ. Clinical Ocular Prosthetics. New York, NY: Springer. 2015.
3. B. Heindl LM, Trester M, Guo Y, Zwiener F, Sadat N, Pine NS, Pine KR, Traweger A, Rokohl AC. Anxiety and Depression in Patients Wearing Prosthetic Eyes. Graefes Arch Clin Exp Ophthalmol. 2021; 259: 495–503.
4. D. Pine K, Sloan B, Stewart J, Jacobs RJ. Concerns of anophthalmic patients wearing artificial eyes. Clin Exp Ophthalmol. 2011; 39: 47–52.
5. E. Pine NS, De Terte I, Pine KR. The impact of eye loss and prosthetic eye wear on recreational, occupational and social areas of functioning. J Ophthalmol Vis Sci. 2017;2 (1): 1016.
6. F. Ribeiro A, Ribeiro JP, Doellinger O. Depression and psychodynamic psychotherapy. Revista Brasileira de Psiquiatria. 2018; 40: 105–109.