Original Research Article

Role of visual acuity in sexual function

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Abstract

Background: Good perception of the external world with the senses is critical for sexual arousal and sexual activity. The present study was conducted to investigate role of visual acuity in sexual function. **Materials & Methods:** This study was conducted on 60 patients of bilateral cataract or monocular patients with cataract of both genders. Patients were divided into three groups. Group I patients were with bilateral visual acuity values of between 0.2 -0.9 logMAR, group II patients were with bilateral visual acuity values of between 1.0 -1.3 logMAR and group III patients with bilateral visual acuity values of 1.4 - 1.7 logMAR. All patients completed the Turkish version of the International Index of Erectile Function (IIEF) before and at 1 month after surgery. **Results:** The mean age in group I was 62.4 years, in group II was 63.5 years and in group III was 64.5 years. There were 16 smokers in group I, 17 in group II and 12 in group III. 13 patients in group I, 14 in group II and 17 in group III were on anti- hypertensive, 7 in group I, 9 in group II and 8 in group III were on anti- cholesterol. The difference was non- significant (P> 0.05). Sexual desire, intercourse satisfaction, overall satisfaction, and total IIEF score were significantly improved after cataract surgery in both the group II and group III. The difference was significant (P< 0.05) whereas orgasmic function and erectile function was non- significant (P> 0.05).**Conclusion:** Authors found an association of low visual acuity and decreased sexual desire in patients undergoing cataract surgery.

Key words: cataract surgery, sexual, visual acuity.

Introduction

Good perception of the external world with the senses is critical for sexual arousal and sexual activity. Previously, studies have shown that impairments in hearing, taste, touch, or olfaction led to sexual dysfunction of varying degrees. The sight has been considered as one of the major senses and gathers most of the information one has regarding the external world. Eyes receive light and transform it into neural impulses; the visual cortex then processes those impulses according to its internal logic[1].

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Previous studies have focused on the association of permanent visual impairment or blindness with sexual A person who is born blind cannot interpret visual expressions; however, a person with acquired visual dysfunction may experience the negative burden of decreased visual expressions.activity; however, they failed to accurately consider the effects of temporary visual impairment on sexual arousal and activity[2]. Eyes receive light and transform it into neural impulses; the visual cortex then processes those impulses according to its internal logic. A person who is born blind cannot interpret visual expressions; however, a person with acquired visual dysfunction may experience the negative burden of decreased visual expressions[3].Previous studies have focused on the association of permanent visual impairment or blindness with sexual activity; however, they failed to accurately consider the effects of temporary visual

impairment on sexual arousal and activity.A cataract is one of the leading causes of visual impairment in the world[4].Although cataracts can be treated successfully, the sight-limiting effects of the cataract may restrict the quality of life and social interactions of patients who hesitate to receive surgery or who cannot receive proper surgical intervention. The ability to construct social interactions is critical for good sexual relations. Previous studies have indicated that sexuality and sexual satisfaction are multifactorial and that visual function had a great influence[5].The present study was conducted to investigate role of visual acuity in sexual function.

Materials & Methods

This study was conducted at the ophthalmology department. It comprised of 60 patients of bilateral cataract or monocular patients with cataract of both genders. The study protocol was approved by the institutional ethics committee. All patients gave written informed consent prior to all surgical procedures. Demographic profile was recorded. A thorough physical examination by an urologist and an ophthalmologist was performed.

A complete ophthalmological examination was performed using corrected distance visual acuity assessment with Snellen chart, applanation tonometry, slit-lamp examination, and posterior segment examination before and 1 month after the cataract surgery. Patients were divided into three groups. Group I patients were with bilateral visual acuity values of between 0.2 -0.9 log MAR were defined as having mild to moderate visual impairment (MVI), group II patients were with bilateral visual acuity values of between 1.0 - 1.3 log MAR was defined as having severe visual impairment (SVI) and patients with bilateral visual acuity values of 1.4 - 1.7 logMAR was defined as having profound visual impairment (PVI). All patients completed the Turkish version of the International Index of Erectile Function (IIEF) before and at 1 month after surgery. Results were tabulated and subjected to statistical analysis. P value less than 0.05 was considered significant.

Results

Table 1: Distribution of patients

Groups	Group I	Group II	Group III
Bilateral visual acuity	0.2 -0.9 logMAR	1.0 -1.3 logMAR	1.4 - 1.7 logMAR
Visual impairment	mild to moderate visual impairment	severe visual impairment	profound visual impairment

Table I shows distribution of patients based on bilateral visual acuity and level of visual impairment. Each group had 20 patients.

Table 2:Demographic characteristics

Variables	Group I	Group II	Group III	P value
Age (Years)	62.4	63.5	64.5	0.81
Smoker/ Non smoker	16/14	17/13	12/18	0.45
Anti- hypertensive	13	14	17	0.98
Anti-cholesterol	7	9	8	0.32

Table II, graph I shows that mean age in group I was 62.4 years, in group II was 63.5 years and in group III was 64.5 years. There were 16 smokers in group I, 17 in group II and 12 in group III. 13 patients in group I, 14 in group II and 17 in group III were on anti-hypertensive, 7 in group I, 9 in group II and 8 in group III were on anti- cholesterol. The difference was non-significant (P> 0.05).

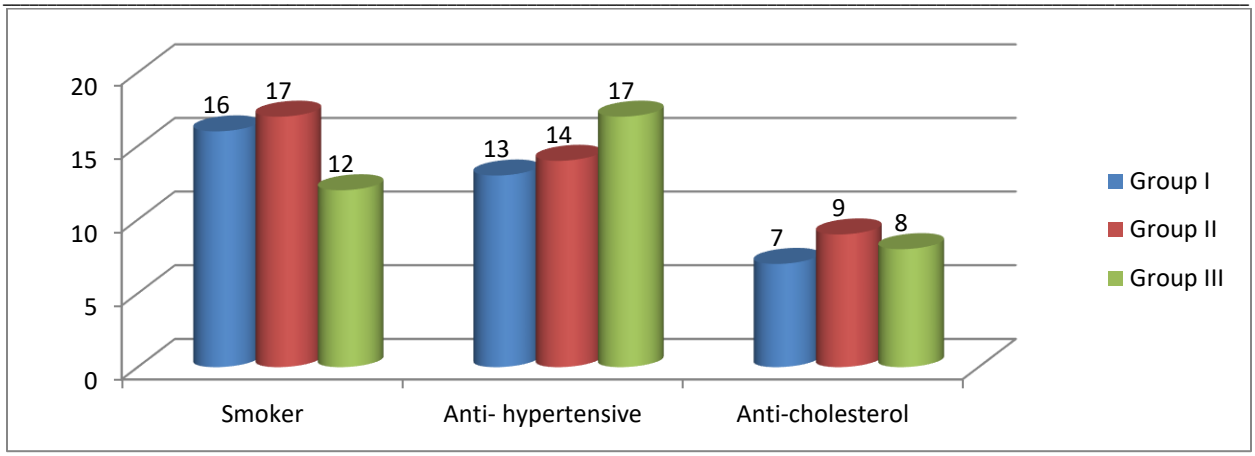

Fig 1: Demographic characteristics

Table 3: Comparison of International Index of Erectile Function outcomes

Function	Group I			Group II			Group III		
	Before	After	P	Before	After	P	Before	After	P
Erectile function	19.2±4.1	19.5±4.1	0.24	20.2±4.2	20.6±4.3	0.31	19.2±4.1	19.4±4.2	0.42
Orgasmic function	6.2±1.5	6.4±1.3	0.14	6.2±1.5	6.3±1.6	0.15	6.2±1.2	6.2±1.2	0.17
Sexual desire	5.1±1.1	5.5±1.4	0.01	4.7±1.0	6.1±1.3	0.03	4.6±1.2	5.7±1.1	0.04
Intercourse satisfaction	7.2±1.2	7.7±2.5	0.02	6.5±1.2	7.8±1.7	0.02	6.8±1.7	7.8±1.8	0.03
Overall satisfaction	5.4±1.5	5.9±1.8	0.01	5.4±1.5	5.8±1.8	0.04	5.3±1.5	5.8±1.7	0.02
Total IIEF score	44.2±9.2	45.2±5.2	0.03	428±7.3	46.6±8.7	0.02	42.2±7.5	44.7±8.7	0.01

Table 3 shows that sexual desire, intercourse satisfaction, overall satisfaction, and total IIEF score were significantly improved after cataract surgery in both the group II and group III. The difference was significant (P< 0.05) whereas orgasmic function and erectile function was non- significant (P> 0.05).

Discussion

Organic dysfunctions such as diabetes mellitus, cardiovascular diseases, penile disorders, and psychological disorders such as depression and anxiety can negatively affect erectile function. Disorders of the five senses may negatively affect erectile function and sexual arousal as well. However, the effects of sense disorders such as visual impairment generally have been underestimated until the end-stages are reached[6]. Sexual visual cues trigger sexual arousal, and exposure to those visual cues increases one's sexual desire. Previous studies have indicated that visual function has had a great influence on sexuality and sexual satisfaction in both genders and reported similar comparison between females and males[7,8]. The present study was conducted to investigate role of visual acuity in sexual function.We found that mean age in group I was 62.4 years, in group II was 63.5 years and in group III was 64.5 years. There were 16 smokers in group I, 17 in group II and 12 in group III. 13 patients in group I, 14 in group II and 17 in group III were on anti- hypertensive, 7 in group I, 9 in group II and 8 in group III were on anti- cholesterol. The IIEF scale is a multidimensional, self-administered scale that evaluates erectile function, orgasmic function, sexual desire, intercourse satisfaction, andoverall satisfaction.

Specifically, questions 1 to 5 and 15 ofthe IIEF scale evaluate the erectile function, questions 9 and 10 evaluate the orgasmic function, questions 11 and 12 evaluate sexual desire, questions 6 to 8 evaluate the satisfaction with intercourse, and questions 13 and 14 evaluate the overall satisfaction[9].We found that sexual desire, intercourse satisfaction, overall satisfaction, and total IIEF score were significantly improved after cataract surgery in both the group II and group III. The difference was significant (P< 0.05) whereas orgasmic function and erectile function was non- significant (P> 0.05).Cankurtaran et al[10] assessed the association of sexual function with visual acuity usingturkish version of the International Index of Erectile Function (IIEF) and Glombok-Rust Inventory of Sexual Satisfaction (GRISS) scales before and at 1 month after the cataract surgery. Mean IIEF scores did not improve after cataract surgery in the MVI group (P > 0.05). Sexual desire, intercourse satisfaction, overall satisfaction, and total IIEF score were significantly improved after cataract surgery in both the SVI and PVI groups (P < 0.05). Mean GRISS subscale scores did not improve after cataract surgery in the MVI group (P > 0.05). Non-sensuality, avoidance, dissatisfaction, infrequency, noncommunication, and total GRISS score were significantly improved after cataract surgery in both the SVI and PVI groups (P < 0.05).Cahill et al[11] noted that patients with a mean visual acuity of 20/100 present difficulties with distance and near tasks and color vision. Distance, near, and color vision is essential for the perception of sexual visual cues and sexual interactions. Broman et al suggested that the impact of cataract on patient quality of life was driven by its negative effect on visual acuity alone.The limitation of the study is small sample size[12].

Conclusion

Authors found an association of low visual acuity and decreased sexual desire in patients undergoing cataract surgery.

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