

SCL-90 self-rating scale analysis on 278 cataract patients in pre- and post- operative periods

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Abstract

• **AIM:** To know the psychological conditions of various cataract patients in pre- and post-operative periods.

• **METHODS:** From June 2008 to June 2009, 278 cataract patients had been asked to complete a questionnaire anonymously of their self-evaluation of symptoms scale (SCL) before and after operation. In their pre-operative and post-operative surveys, the results were compared with the norms respectively. Patients were divided into two groups. Group A were age-related cataract patients; while Group B were cataract patients with glaucoma, trauma or metabolic disease.

• **RESULTS:** When cataract patients' masculine scores of somatization, depression, anxiety and fear factors before and after the operation rank higher than the norms, the differences had statistical significance ($P < 0.05$), especially the somatization factor ($P < 0.01$). While cataract patients with diseases such as glaucoma, trauma or diabetes got higher marks than age-related cataract patients in the aspects of anxiety, somatization, depression ($P < 0.05$), and fear factors, the differences were of statistical significance ($P < 0.01$).

• **CONCLUSION:** Cataract patients both in pre- and post-operative periods have somatization behaviors and emotions of depression, anxiety and fear. Cataract patients with glaucoma, trauma or diabetes especially anxiety have more obvious symptoms than age-related cataract patients.

• **KEYWORDS:** cataract; pre- and post-operative periods; psychological assessment; SCL-90 self-rating scale

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INTRODUCTION

Cataract is a disease ranking the first that leads to blindness in our country and its high incidence has

greatly affected patients' lives. Phacoemulsification, an effective therapy, brings good news to cataract patients. However, owing to a large number of patients and operations for surgeons, the short period of hospitalization of the patients, we find there is a strong feeling of dissatisfaction among the patients after the operation, which leads to the tense relationship between doctors and patients. Here, the author tries to do her research on various types of cataract patients with their own self-evaluation from pre- and post-operative periods by using SCL-90 self-rating scale analysis in order to reveal their psychological states and provide some statistics for clinical communication between doctors and patients.

MATERIALS AND METHODS

Patients The subjects were selected from those cataract patients diagnosed and operated in our section office from June 2008 to June 2009, excluding those suffered from some major diseases or psychosis and those who were not able to independently finish self-rating scale under the age of 16. Illiterate patients and patients with insufficient education had to finish the scale with the assistance of the working staff.

Methods Here all the pre-operation conversations had to be made between the participating patients and the same doctors who were going to perform the operation. The self-rating scale must be done independently for the first time the day before the operation^[1], and had to be handed in as soon as it is finished anonymously. Seven days after the operation, the patients had to do the self-rating scale again for the second time under the same directions. Up to now, among 600 distributed copies of questionnaire, 556 were handed in, with a high effective rate of 92.7%. This was a self-rating scale extensively accepted domestically and internationally. Thus, the data could provide a reliable and genuine assessment with validity from 0.77 to 0.99. Those 90 items in the questionnaire involved the aspects concerning such emotions as feelings, thoughts, consciousness, behaviors, habits, interpersonal relationship, foods and drinks, sleep, etc. The results are revealed around 10 factors: somatization, complusion, interpersonal relationship, depression, anxiety, hostility, terror, crankiness and psychopathy and the others. A 5-level system is used ranking from score 1 to 5, which shows respectively the degrees ranging from none, slight, medium, slightly serious to serious^[2]. The National people norms were adopted as the reference standards for the testing results. And 278 patients were divided into two groups: Group A, 104 cataract patients with relevance to age; Group B, 174 cataract patients with illnesses of glaucoma, trauma, and metabolism.

Table 1 Score comparison between cataract patients and norm

SCL-90	Preoperation(<i>n</i> = 278)	Postoperation(<i>n</i> = 278)	Norm(<i>n</i> = 1 388)	Group A(<i>n</i> = 104)	Group B(<i>n</i> = 174)
Somatization	1.93 ± 0.52 ^b	1.74 ± 0.45 ^a	1.37 ± 0.48	1.70 ± 0.27	1.82 ± 0.45 ^c
Compulsion	1.91 ± 0.46	1.57 ± 0.43	1.62 ± 0.58	1.67 ± 0.34	1.69 ± 0.72
Interpersonal relationship	1.76 ± 0.57	1.59 ± 0.74	1.65 ± 0.51	1.66 ± 0.47	1.72 ± 0.82
Depression	2.03 ± 0.43 ^a	1.59 ± 0.24 ^a	1.50 ± 0.59	1.53 ± 0.19	1.63 ± 0.92 ^d
Anxiety	1.78 ± 0.48 ^b	1.66 ± 0.42 ^b	1.39 ± 0.43	1.41 ± 0.57	1.50 ± 0.79 ^c
Hostility	1.52 ± 0.54	1.54 ± 0.48	1.48 ± 0.56	1.48 ± 0.92	1.52 ± 0.42
Terror	1.67 ± 0.57 ^a	1.50 ± 0.27 ^a	1.23 ± 0.41	1.33 ± 0.73	1.40 ± 0.83
Crankiness	1.48 ± 0.47	1.42 ± 0.57	1.43 ± 0.57	1.45 ± 0.66	1.47 ± 0.72
Psychopathy	1.46 ± 0.49	1.32 ± 0.54	1.29 ± 0.42	1.33 ± 0.68	1.37 ± 0.21

^a*P* < 0.05, ^b*P* < 0.01 vsnorm; ^c*P* < 0.05, ^d*P* < 0.01 vsgroup A

Statistical Analysis With adoption of LSD-*t* and *t* tests, all the materials were analyzed by software SPSS 15.0.

RESULTS

On the day before operation, patients showed differences in the factors and norms of somatization, anxiety, fear and depression, which had statistical significance (*P* < 0.05). And the differences in factors and norms of somatization, anxiety have obvious statistical significance (*P* < 0.01). Seven days after the operation, the differences shown by the patients in somatization, anxiety, fear and depression factors and norms had statistical significance (*P* < 0.05), among which the difference in anxiety factor and norm had obvious statistical significance (*P* < 0.01, Table 1). Between age-related cataract patients and cataract patients complicated with glaucoma, trauma, metabolism syndrome, the differences in factors of depression, somatization, anxiety and fear had statistical significance (*P* < 0.05), and obvious difference for depression factors in particular (*P* < 0.01).

DISCUSSION

The author holds that it is necessary to assess various cataract patients' psychological conditions before and after operation. The reasons are as follows: Firstly, patients' mental states before and after operation would definitely have an impact on the surgery. Intra-operative negative emotions will increase the cardio-cerebral vascular accident and the occurrence of explosive choroidal hemorrhage risk^[3]; Secondly, with large numbers of patients waiting for operation, and short periods of patients' hospitalization, there is an insufficiently psychological communication between doctors and patients, which requires a necessary niche-targeting psychological intervention to the patients according to their mental states during the pre- and post-operative periods. Thirdly, patients with complicated diseases, such as glaucoma, trauma, and diabetes, etc have to confront with their vision recovery with great differences from patient to patient, which will inevitably lead to some patients' dissatisfaction from their psychological expectation. As a result, they need more careful and individual communication before and after operation. Lastly, a high incidence rate of after-cataract^[4] has led to the increase of patients' worry and uncertainty to the operation and the decrease of their trust on doctors and nurses. Consequently,

they need an effective and psychological intervention. However, at the clinical stage, there are two points which have been overlooked in the psychological assessments during the patient's pre- and post-operative periods. One is that the psychological evaluation is generally left to nurses as routine work for pre-operative patients and they could just offer simple comfort to patients before their operation; while the doctors often pay more attention to operation itself. The other is that the assessments of the patients' psychological states are often made subjectively, which lack specific speculation and targeted assessments neither objectively or quantitatively. What's more, domestic scholars fail to give enough attention to these points, so there are few relevant papers in this regard. Therefore, I take this as an entry point and adopt "SCL-90 Symptom Checklist" on the issue.

Symptom Checklist-SCL-90, which is one of the world's most famous mental health scale testing, is currently the most widely used outpatient mental disorders and mental illness Checklist. SCL-90 has good ability to distinguish the possible mental obstacles or psychological obstacles in psychological edge, so it is now widely used to check the existence of physical and mental illnesses at the clinical stage. Major hospitals have been making use of this scale to test patients with psychological and psychiatric problems. The scale of somatization factor, mainly for the physical discomfort, in cardiovascular, gastrointestinal, respiratory systems and other systems, is the chief complaint, with obvious symptoms such as headache, back pain, muscle aches, and other physical performances. The anxiety factor mainly manifests in the irritability, restlessness, nervousness, tension or resulting from some physical signs, such as tremors, etc. The depression factor mainly shows in the depressed feelings and moods, with decreased interest in life, lack of motivation, or even energy loss etc. It is also reflected in the disappointment, pessimism or depression which is associated with cognitive and physical aspects of the experience. The fear factor is mainly revealed in the psychological conflicts in traveling and social activities^[5].

From this study, it can be seen that in the pre-operative period, patients showed positive performance in somatization, anxiety, fear and depression, particularly in somatization and

anxiety; while after the surgery, patients manifested positive performance in anxiety, somatization, depression and fear, with anxiety in particular. We consider that this is because post-operative visual acuity did not meet the expectations of patients. So, health care providers should not ignore the psychological intervention in this period. And the group of cataract patients with glaucoma, trauma and diabetes are more vulnerable to depression, anxiety and somatization than age-related cataract patients. Therefore, compared with the latter, patients of this group suffering serious ocular or systemic, or even life-threatening illnesses, might have to face second surgery, or even more. In conclusion, besides drug therapy, doctors and nurses should actively perform personalized communication for the depression, anxiety and somatization, and help patients foster confidence in the fight against the diseases in order to achieve an effective therapeutic effect.

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围手术期白内障患者 278 例 SCL-90 自评量表结果分析

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摘要

目的: 了解我科各型白内障患者围手术期的心理健康状况, 为该特定人群特定时期的心理评估和心理干预工作提供依据。

方法: 应用症状自评量表 (SCL-90) 对在我科 2008-06/2009-06 确诊的 278 名各型白内障患者在围手术期进行无记名问卷调查。在术前和术后分别进行问卷调查, 其结果与常模作比较; 将患者分为两组, A 组为年龄相关性白内障, B 组为伴有青光眼, 外伤或代谢性疾病的白内障患者, 分别将这二组的结果进行比较。

结果: 各型白内障患者术前和术后的躯体化, 抑郁, 焦虑和恐惧因子的阳性得分高于常模, 其差异具有统计学意义 ($P < 0.05$), 尤其是躯体化因子 ($P < 0.01$)。B 组的焦虑, 躯体化, 抑郁和恐惧因子阳性得分高于 A 组, 其差异具有统计学意义 ($P < 0.05$), 其中焦虑因子的差异具有显著的统计学意义 ($P < 0.01$)。

结论: 各型白内障患者在术前和术后都存在不同程度的躯体化表现和抑郁, 焦虑, 恐惧情绪, 尤以躯体化明显; 合并有外伤, 青光眼或者代谢性疾病的白内障患者的上述表现比年龄相关性白内障更加显著, 尤其是焦虑。

关键词: 白内障; 围手术期; 心理评估; 症状自评量表 SCL-90