Case Report

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Paranoid Hallucinations following Ocular Surgery

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Key Words

Psychiatric complications

Paranoid hallucinations

Ocular surgery

Abstract

Paranoid hallucinations were seen in 2 patients following ocular surgery. Following his second cataract surgery, a 77-year-old male patient became disorientated, suffered paranoid hallucinations and fractured his first lumbar vertebra 'falling' from the balcony of the first floor. A 79-year-old female suffered from paranoia and visual hallucinations following goniotrephination surgery.

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Introduction

Psychiatric complications following ocular surgery have been reported previously, the delirium being mainly attributed to both eyes being occluded postoperatively [1-4]. Recently, Sekimoto et al. [5] reported 3 patients who developed psychiatric complications after ocular surgery, none of whom received eyepatches on both eyes. We recently treated 2 patients with postoperative delirium, 1 of whom had previously undergone an unremarkable cataract operation in the other eye.

Case Report

Casel

A 77-year-old male patient complained of increased blurring of vision in the left eye. His past medical history included epileptic fits (20 years), 17 years of insulin-dependent diabetes, a myocardial infarction 17 years ago, and coronary heart disease with beginning pulmonary insufficiency.

The patient's previous ophthalmological history included bilateral nonproliferative diabetic retinopathy. One year previously, the patient had undergone argonlasercoagulation treatment and cataract surgery in the right eye. The intra- and postoperative course had been uncomplicated. The left eye had a nuclear and a posterior subcapsular cataract.

On admission, the corrected visual acuity was 0.08 in the right eye and 0.2 in the left eye. On July 29, 1992, the patient underwent

phakoemulsification and implantation of a posterior chamber intraocular lens. The intra- and immediate postoperative course was uneventful. In the evening of the first postoperative day, the patient was found to be disorientated and having paranoid hallucinations. He could however be persuaded to return to sleep; subsequent monitoring of the patient showed him to be sleeping. Around 1:30 a.m. on the second postoperative day, the patient was found outside, having 'fallen'

from the balcony of the first floor. He was referred to the department of surgery where a fracture of the first lumbar vertebra was diagnosed. The psychiatric symptoms showed slow recovery.

Case 2

A 79-year-old female complained of an increasing visual field defect in the right eye. She had a 2-year history of known bilateral open-angle glaucoma with pseudoexfoliation syndrome for which she had recently undergone bilateral argonlaser trabeculoplasty. She also suffered from bilateral cataract and Fuchs' endo/epithelial dystrophy.

Her past medical history included drainage of a liver abscess in 1962 and coronary heart disease of 10 years' duration.

On admission, her corrected visual acuity was 0.33 on each side. On September 1, 1992, she underwent goniotrephination surgery on the right eye. The intra- and immediate postoperative course was uneventful. On the evening of the second postoperative day, the patient experienced episodes of paranoia, returning to seemingly normal during the daytime. Over the next nights, the disorientation and paranoid hallucinations increased in strength, leading to aggressive behavior, thus necessitating psychiatric referral. There the patient's symptoms of paranoia ceased over the next 5 days.

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Discussion

Visual hallucinations in otherwise healthy and sane elderly people have frequently been described [6,7]. People suffering from this Charles Bonnet syndrome are able to recognize their visual hallucinations as such. Most of these people have a reduced visual acuity due to, e.g. cataract. Improvement of visual acuity (e.g. cataract operation) frequently has a good therapeutic effect on the visual hallucinations as well [7]. As opposed to patients with Charles Bonnet syndrome, our patients did not develop their hallucinations until after cataract surgery, nor were they aware of having hallucinations.

Following ocular surgery, 'cataract delirium' has been reported to occur, predominantly on the second postoperative day, in patients in whom both eyes are occluded [1-3]. Etiologic factors discussed are aging, senile encephalopathy, drugs and sensory deprivation due to the eye covering [8].

In our patients, paranoid hallucinations also developed on the second postoperative day although only the eye operated on was occluded. Nevertheless, sensory deprivation seems to play the most important part in the development of psychiatric complications following ocular surgery. This is best demonstrated in the first patient who had previously undergone an uneventful cataract operation of the right eye. Now that the better left eye was occluded the patient suffered sensory deprivation which he may not have noticed in the previous occlusion of the right eye, this having a reduced visual acuity.

Supposedly, predisposing factors such as aging, senile encephalopathy and drug intake might also cause morphologic brain lesions leading to the so-called 'Durchgangs-Syndrom' (or symptomatic transitory psychotic syndrome) which can also manifest in a change of awareness and other cerebral functions [9]. However, as our patients had had no previous psychiatric history and as those predisposing factors remained unchanged within that short time period, those predisposing factors cannot account solely for the psychiatric complications seen. They might however lower a certain threshold level. The second patient had also previously had both

of her eyes occluded for a day following argon laser trabeculoplasty, the last time only 14 days previously. All other predisposing factors remained unchanged. It therefore seems likely that not only sensory deprivation in itself but perhaps also a certain time factor may be of importance. In this regard, also interesting to note is that in both patients the psychiatric symptoms first occurred at night time, although the pathognomonic relevance of this can at present be only speculated on.

Paranoid hallucination still seems to be a more frequently occurring complication of ocular surgery than expected. As the pathogenesis of this complication is not entirely clear, further patient data needs to be collected. One of the main underlying causes seems to be sensory deprivation in itself as well as being time-related.

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