



RELATO DE CASO

BILATERAL ACUTE ANGLE-CLOSURE GLAUCOMA WITH VISUAL IMPAIRMENT PRECIPITATED BY USE OF TRICYCLIC ANTIDEPRESSANTS

GLAUCOMA AGUDO BILATERAL COM PIORA DA VISÃO PRECIPITADO PELO USO DE ANTIDEPRESSIVO TRICÍCLICO

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ABSTRACT

Acute angle-closure glaucoma is an important cause of morbidity in the elderly. A case is described of a patient with narrow angle who had an attack of bilateral acute angle closure glaucoma, precipitated by the use of tricyclic antidepressants. The patient had an increase in intraocular pressure with ocular pain and decreased vision bilaterally, after starting treatment with amitriptyline for endogenous depression. After treatment with antiglaucomatous drugs, peripheral iridotomy was performed. The pressure did not decrease significantly. A trabeculectomy was performed on both eyes. Despite the treatment, severe visual impairment occurred in this case. It is suggested that antidepressant drugs should be prescribed cautiously in patients at risk for glaucoma, and the patients should be monitored by an ophthalmologist.

Indexing terms: antidepressive agents, tricyclic, depression, glaucoma, angle-closure, intraocular pressure, trabeculectomy.

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RESUMO

O glaucoma agudo de ângulo estreito é uma importante causa de morbidade em idosos. Descrevemos o caso de uma paciente com ângulo estreito que apresentou ataque de glaucoma agudo bilateral, precipitado pelo uso de antidepressivo tricíclico. A paciente apresentou pressão intra-ocular elevada, dor ocular e diminuição da visão bilateral após iniciar uso de amitriptilina para depressão endógena. Após tratamento com medicação antiglaucomatosa, foi realizada iridotomia periférica. Contudo, as pressões intra-oculares não diminuíram significativamente. Posteriormente, trabeculectomia foi realizada em ambos os olhos. Apesar do tratamento, houve perda visual grave. Os autores sugerem que os antidepressivos devam ser prescritos com cautela para pacientes com risco de glaucoma, havendo necessidade de monitoração por um oftalmologista.

Termos de indexação: antidepressivos tricíclicos, depressão, glaucoma de ângulo fechado, pressão intra-ocular, trabeculectomia.

INTRODUCTION

Many systemically administered drugs produce adverse ocular effects¹⁻⁷. Fortunately, relatively few are capable of causing significant, irreversible visual impairment. It is the responsibility of every clinician when prescribing systemic therapeutic agents to be aware of potential adverse ocular reactions, to appreciate their significance and to inform the patient of the potential risks of the treatment¹. Tricyclic antidepressants and other agents with anticholinergic properties may cause accommodation disturbances and pupil dilatation¹⁻⁷. In rare cases, the latter may precipitate acute angle closure glaucoma in susceptible individuals. The purpose of this paper is to report on a depressive patient, recently examined by the authors, who suffered angle closure glaucoma and visual impairment of both eyes.

CASE REPORT

On October 24, 2004, a 60-year-old woman was referred to an Emergency Ophthalmology Department with complaints of a 14-day history of acute loss of vision, ocular pain and redness of both eyes (OU), nausea, and vomiting. Her previous medical history included depression but her previous ocular history was unremarkable. Her internist had

prescribed amitriptyline (75mg/d) for endogenous depression four days before the symptoms started. An examination revealed bilaterally affected visual acuity of the hand motions, conjunctival hyperemia, moderately edematous cornea, fresh keratic precipitates on the corneal endothelium, severe narrowing of the anterior chamber, moderately dilated pupils, atrophic iris (Figures 1A and 2A), closed angles in gonioscopy and elevated intraocular pressure (66 mm Hg right and 64 mm Hg left). Nuclear sclerosis of the lens 1+ was present in both eyes. The *fundus oculi* was not clear. Ultrasound biomicroscopy revealed a narrow anterior chamber and closure angles (Figures 2A and 2B). Amitriptyline was discontinued and immediate medical treatment was instigated with oral acetazolamide 250mg q.i.d, pilocarpine 2.0% q.i.d, brimonidine 0.2% t.i.d, and timolol 0.5% b.i.d. Despite maximal doses of the medications, the intraocular pressure only decreased to 30mmHg. The patient did not complain of ocular pain. Bilateral laser iridotomies were performed but the intraocular pressure remained at about 30mmHg for both eyes. Trabeculectomy was performed on the right eye on October 26, and on the left eye on November 16, without complications. On December 12, her visual acuity was adequate to count fingers at 1 meter, and the intraocular pressure was 10mm Hg OU for both eyes. Severe cupping of the optic discs was observed ophthalmoscopically.

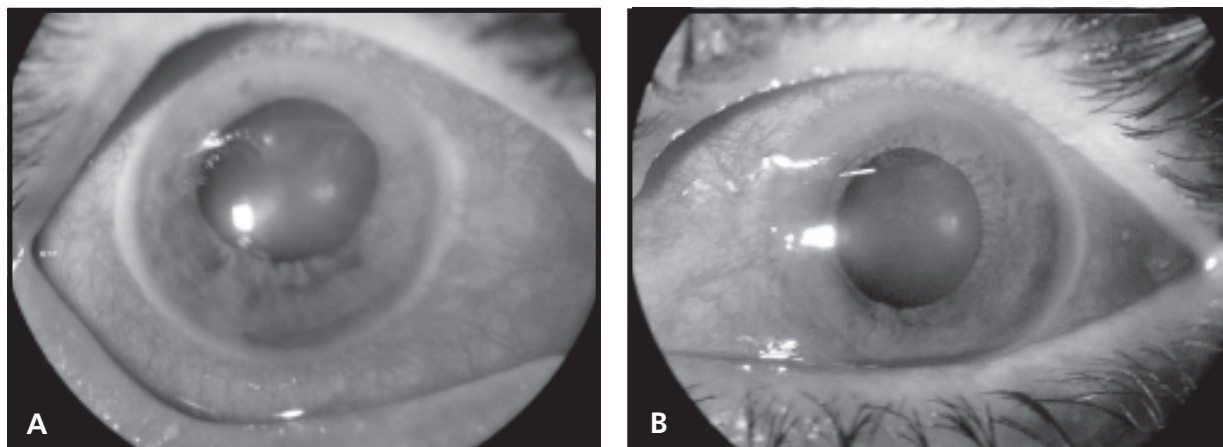


Figure 1. Conjunctival hyperemia, moderately dilated pupils and atrophic irises are seen in the right (A) and left (B) eyes.

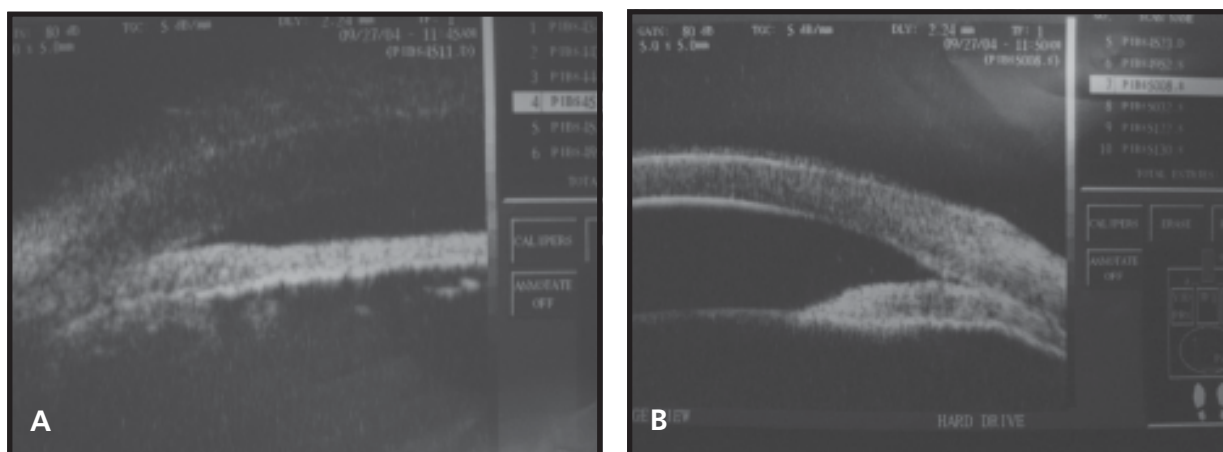


Figure 2. Ultrasound biomicroscopy demonstrating narrow anterior chamber and closure angles in the right (A) and left (B) eyes.

DISCUSSION

Acute angle closure glaucoma is an important cause of visual morbidity in the elderly. It occurs in predisposed eyes with narrow drainage angles. The mid-dilated pupil blocking aqueous circulation. Antidepressant agents have been reported in several cases of acute angle closure glaucoma²⁻⁵ however bilateral visual loss induced by these agents, as demonstrated in our patient, may be rare³.

In a review of 28 000 reports on the side effects of medications, submitted to a central registry by physicians in the United Kingdom, 1 000 presented

ocular side effects⁸. Of these, there were 15 reports in which angle closure glaucoma may have been due to the use of tricyclic antidepressants, eight of which were related to amitriptyline. Nevertheless, in a survey of 3 000 patients being treated with various psychotropic drugs⁹, no cases of glaucoma related to the use of tricyclic antidepressants were found.

Most antidepressants produce relaxation of the sphincter muscle of the pupil, resulting in mydriasis, aqueous outflow blockage and elevation of intraocular pressure²⁻⁴. It is unfortunate that the diagnosis and therapy for glaucoma may be delayed, as in this case.

It is very important that psychiatrists and other specialists be aware of such side effects of these effective and safe antidepressants. A large proportion of patients currently at risk for acute angle closure glaucoma, are unaware of their diagnosis. Close monitoring by ophthalmologists is indicated for patients with narrow angles, for whom treatment with tricyclic antidepressants is indicated. Therapeutic alternatives to minimize the risk of provoking closure should be provided, since, despite treatment, angle closure glaucoma may result in severe visual impairment.

CONCLUSION

Physicians should be aware that antidepressants can precipitate angle closure glaucoma in susceptible eyes. Ophthalmologic examinations are recommended prior to the initiation of treatment with drugs that cause pupil dilation. It should be made clear that these drugs are contraindicated in patients with occlusive angles, which indicates the need for iridotomy. Early diagnosis and treatment are essential to prevent further complications.

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