BILATERAL GRANULOMATOUS UVEITIS AS A SIDE EFFECT OF TOPICAL BRIMONIDINE: TWO CASE REPORTS

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CASE REPORT 1

An 80 year old female in good general health was diagnosed with normal tension glaucoma and was prescribed Alphagan® (brimonidine tartarate 0.2%) twice daily in both eyes. The intraocular pressure decreased from 15 mmHg to 11 mmHg bilaterally. The patient did not complain of any side effects when using the brimonidine drops. Exactly one year later, she presented with a sudden onset of chemosis, significant conjunctival injection, and keratic precipitates in both eyes. Her intraocular pressures had risen to 25 mmHg in the right eye and 35 mmHg in the left eye. She was still using brimonidine as sole ocular antihypertensive on a twice daily basis. The diagnosis of brimonidine-induced granulomatous anterior uveitis was made and Alphagan® was discontinued. The patient was reexamined ten days later, at which time the uveitis had completely resolved. Then, latanoprost therapy was started. One month later, the intraocular pressure had dropped to 9 mmHg in the right eye and 10 mmHg in the left eye under latanoprost therapy, without any sign of recurrence of the uveitis.

CASE REPORT 2

A 77 year old female in good general health was started on Alphagan® treatment in both eyes after a diagnosis of pseudoexfoliative glaucoma had been made. Ten months later she presented with bilateral granulomatous uveitis consisting of roughly twenty mutton-fat keratic precipitates in each eye and a marked conjunctival injection. Her intraocular pressure had risen from 17 mmHg previously to 33 mmHg in the right eye and 24 mmHg in the left eye under Alphagan® therapy. One week after discontinuation of the eye drops, there was a complete resolution of all signs and symptoms of uveitis, and the intraocular pressure had dropped to 16mmHg in both eyes under prednisolone eye drops.

DISCUSSION

Granulomatous anterior uveitis with increased intraocular pressure in association with topical brimonidine has been reported in several case reports in a total of eleven patients. Here we report an additional two cases. In almost all cases, patients were more than 75 years of age, as were both of our cases. Both patients were in good general health and had no prior history or other identifiable cause of uveitis. All signs and symptoms of uveitis resolved quickly after discontinuing the brimonidine eye drops. In the literature, this anterior granulomatous uveitis had been described only after at least eleven months of brimonidine treatment, making it a late side effect, such as in our case reports. The more common allergic reaction to brimonidine, consisting of the typical contact dermato-conjunctivitis, occurs mostly after 6-9 months of therapy. As suggested by Byles et al., up to 15% of patients in clinical trials developed allergic conjunctivitis to brimonidine, often leading to a discontinuation of brimonidine

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therapy before the uveitic reaction could develop. The late occurrence of this granulamatous response suggest that it is not due to a direct toxic effect of the drug, but is more likely due to a secondary cell mediated immune response, where the drug acts as a hapten, or immune modulator (disease modifier).

Brimonidine should be considered as a possible cause of drug-induced uveitis, especially after approximately one year of treatment. All suspected cases should be reported in order to estimate the incidence of this side effect. Even though it is probably rare, it can be a potentially sight-threatening complication and should thus be recognized early, since cessation of the drug leads to complete resolution of the uveitis.

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