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Sir,

Bilateral acute anterior uveitis as a side effect of trimethoprim

Trimethoprim is the most commonly used drug in the treatment of urinary tract infection in women. Common side effects associated with its use include skin rash, itching, gastrointestinal upset, anaemia, and swelling of the tongue. We report a rare case of trimethoprim-induced bilateral acute anterior uveitis.

Case report

A 41-year-old woman, who had been taking oral trimethoprim 200 mg twice daily for 2 days, was referred by her general practitioner with a 8-h history of bilateral painful red eyes. She had also developed sudden-onset chills, itching, arthralgia, and myalgia. The examination revealed bilateral acute anterior nongranulomatous uveitis with raised intraocular pressures. Her fundi were normal.

Her past ocular history was unremarkable. She had been treated with trimethoprim on two previous occasions without any adverse effects.

The uveitis was treated with topical steroids and mydriatics, with complete recovery within a few days of discontinuing trimethoprim. Routine blood tests including acute phase reactants were all normal. Her chest radiograph was negative, as were toxoplasmosis antibodies, antistreptolysin-O and antinuclear antibodies. No bacteria were detected in her urine. HLA-B27 was negative.

With the patient's informed consent, she was re-challenged with a single oral dose of 200 mg of trimethoprim. Approximately 45 min after taking the drug she became ill, with visual disturbance, headache, arthralgia, and myalgia. There was bilateral acute anterior uveitis. Topical treatment was instituted and recovery was again rapid and complete.

Comment

Trimethoprim is a widely used antibiotic, either alone or in combination with sulpha drugs. Serious side effects are rare, although there have been occasional case reports of aseptic meningitis and Stevens–Johnson syndrome.[1,2] Acute uveitis has been described only twice previously.[1,2] Retinal haemorrhages have been reported.[3] In the past uveitis has been attributed to the systemic use of sulphonamide derivatives.[4] Sulphonamides are frequently administered in combination with trimethoprim, and it is possible that some of the reported cases of sulphonamide-induced uveitis may in fact have been due to trimethoprim.

Trimethoprim is widely distributed in body fluids, including aqueous and vitreous humour. Interestingly, our patient had no side effects on the first and second occasions she was given trimethoprim. On the third occasion, she developed symptoms after three doses, and there was an even more rapid recurrence of uveitis with rechallenge. This strongly suggests the possibility of an immunologically mediated process. A similar chain of events was noted in the case report by Gilroy *et al*.[2] It appears, therefore, that a patient who has shown no side effects with trimethoprim in the past can develop uveitis on repeated exposure.

The association of bilateral anterior uveitis with systemic use of drugs has rarely been reported, and physicians, general practitioners, and ophthalmologists should be aware of potential complication and include side effects of systemic drugs in the differential diagnosis of uveitis.

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No competing interest

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Sir,

The influence of disease prevalence on screening for AMD

I read with interest the article by Jain *et al*[1] titled 'Screening for age-related macular degeneration using nonstereo digital photographs'. The authors found reasonably high sensitivities and specificities for detection of ARM and age-related macular degeneration (AMD) by graders viewing digital photos. While their results are not in question, I do raise objection to their discussion in which they state that the findings of the study might usefully be extended into a primary care setting. This assumption ignores a pivotal statistical fact and highlights why sensitivities and specificities alone do not tell the whole story when assessing how useful a screening test is.[2]

The setting of the study involved a contrived selection of cases from a retinal unit database. In this 'population', the prevalence of neovascular AMD was 31%. In a primary care setting, of course, the real prevalence will be much lower, say 2% in patients over 65 years. While this difference does not affect the sensitivity or specificity of the screening tool, it does impact very significantly on the positive predictive value.

In the study, for example, for grader 1, the sensitivity was 82.1% and the specificity was 79.7%. The positive predictive value can be calculated as 64.8% in the study 'population'. If the same sensitivity and specificity are applied to a primary care population, with an AMD prevalence of say 2%, the positive predictive value drops to 7.8%. This means that over 92% of positive results will actually be false positives.

This demonstrates that the utility of a screening tool cannot be evaluated without reference to the prevalence of the disease in the population in which it is to be used.

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1 Jain S, Hamada S, Membrey WL, Chong V. Screening for age-related macular degeneration using nonstereo digital fundus photographs. *Eye* 2006; **20**: 471–475.
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Sir,

Reply to Mr Ali

We would like to thank Mr Ali for his interest in our article 'Screening for age-related macular degeneration using non stereo digital photographs'.[1] We agree with the obvious assertion that prevalence of a disease affects the utility of a screening tool by impacting on the positive predictive value.

However, we did not evaluate this technique as a general screening measure for people over a certain age but only for those with suspicious macular lesions that necessitated a retinal opinion. The 'contrived' database he refers to were patients referred to the retinal service by optometrists for exactly the above reason and these form our intended target population for telemedicine. In this selected group, we observed a high sensitivity and specificity of AMD detection.

We believe that this technique can significantly reduce the time between referral and appointment with a retinal specialist in patients with treatable CNV, which was the aim of the study in the first place.

Reference

1 Jain S, Hamada S, Membrey WL, Chong V. Screening for age-related macular degeneration using nonstereo digital fundus photographs. *Eye* 2006; **20**: 471–475.

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