settle naturally or as a result of treatment. On the other hand, patients presenting to the ophthalmic casualty department tend to be those not responding to treatment, which might bias our sample towards those for whom steroid treatment is inappropriate. Earlier treatment with steroids or antibiotics can alter clinical signs, which may explain our finding of five patients with no evidence of eye disease. In all other cases the diagnosis was clear after ocular examination.

Despite the limitations of having a possibly biased sample, the results of the survey proved valuable. The relative frequency of incorrect diagnosis by general practitioners (43%) or of possibly undefined or undiagnosed disease (44%) is not surprising as accurate diagnosis of ocular disease, especially that requiring treatment with steroids, depends on examination using a slit lamp biomicroscope and other specialist ophthalmic techniques. The prescription of ocular steroids (based on the general practitioner's diagnosis) was indicated in only 3% of cases and was potentially beneficial in 20% of cases (but would not have been our first line treatment); it was not indicated in 77% of cases.

In view of our findings we suggest some general principles for the use of steroids.

Ocular conditions for which steroids are essential—Any condition for which steroid treatment is essential requires ophthalmic supervision from the start of treatment; the ocular complications of topical treatment with steroids are numerous and well described.^{6,7} Only one general practitioner named a uveitis as the cause of the patient's ocular disease, a diagnosis for which a steroid would have been indicated; unfortunately, the patient had a condition for which initial treatment with steroids is strictly contraindicated (case 6).

Ocular conditions for which steroids are beneficial—There were 23 cases in which the condition diagnosed would have benefited from second line treatment with steroids. The general practitioner's diagnosis was known in 15 of these cases but agreed with ours in only four (27%). Most notable was the fact that 17 of these 23 patients were given high potency ocular steroids (betamethasone 0.1% eye drops, dexamethasone 0.1% eye drops, or prednisolone 0.5% eye drops), whereas only six out of 23 were given the fairly low potency steroids (hydrocortisone 1.5% eye drops or clobetasone 0.1% eye drops) that are appropriate for these conditions.

Ocular conditions for which steroids are not indicated—There were

22 cases out of 30 in our survey in which the general practitioner's diagnosis was not an indication for treatment with steroids (the most frequent being conjunctivitis, for which a steroid or steroid and antibiotic combination was prescribed). On the basis of the ophthalmic diagnosis 23 cases out of 49 did not require steroid treatment. Steroids were also prescribed inappropriately for three cases of watery eyes (see case 2); for several undiagnosed problems caused by contact lenses (cases 3 and 4); and for miscellaneous conditions such as "dry," "gritty," or "red" eyes.

Ocular conditions for which steroids are contraindicated—In this survey three patients who received topical treatment with steroids had conditions strongly contraindicating such treatment (cases 4, 5, and 6). These three patients all developed severe ocular disease, two required admission to hospital, and all suffered permanent visual impairment as a result of the inappropriate treatment they received before presentation.

Although some of the complications of and contraindications to ocular steroids are listed in the *British National Formulary* and the *Monthly Index of Medical Specialities*, a general practitioner is not in a position to examine the eye accurately or establish a diagnosis and therefore should not be using the steroid preparations listed.

All views expressed in this paper are those of the authors and do not necessarily represent the views of all staff at this hospital.

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Incidence of inappropriate treatment of herpes simplex keratitis with topical steroids

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Topical steroids are applied to the eye for various conditions but they are not without dangers. Side effects include steroid induced glaucoma and cataract. More serious is their inappropriate use in infectious keratitis, particularly as they may enhance herpetic keratitis. The frequency with which this occurs has not been studied recently. We have carried out a large postal survey of ophthalmologists to ascertain the incidence and prognosis of steroid enhanced herpetic keratitis.

Medical practitioners are advised never to prescribe topical ophthalmic steroids without first seeking the opinion of an ophthalmologist

Subjects, methods, and results

A questionnaire was sent to the first 200 ophthalmologists in the 1984 *Medical Register* asking: (1) if they had ever seen inappropriate use of steroid eye drops—and if so how many cases they had seen within one year and how many of these were of herpes simplex eye disease; (2) what proportion of these patients had suffered "significant visual handicap" (a) overall and (b) specifically among those being treated for herpes simplex; (3) whether the problem in their area was becoming more common, less common, or staying the same; and (4) if they would favour general practitioners being advised not to prescribe topical ophthalmic steroids or steroid and antibiotic mixtures except after consultation with an ophthalmologist.

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We received a total of 160 replies (response rate 80%). All the ophthalmologists had seen inappropriate treatment with steroids, and 119 (74.4%) had seen such a patient within one year. Of these, 100 (84%) had seen cases of herpes simplex eye disease inappropriately managed with steroids, with a mean of 5.6 patients per respondent. Inappropriate steroid treatment was estimated to have produced significant visual handicap in 33% of patients overall and in 51% of patients with herpetic eye disease.

One hundred and fifty seven respondents replied to question 3: three thought the problem was becoming more common, 93 less common, and 61 that it was staying the same. Of the 158 respondents who replied to question 4, 127 (80%) thought that general practitioners should not prescribe topical steroids for the eye without prior consultation.

Comment

Despite 30 years since the description of the deleterious effects of steroid enhancement of dendritic ulcers¹ and the warnings in both undergraduate² and postgraduate³ textbooks the problem persists. From our figures, and assuming that these are representative of the 420 consultant ophthalmologists in England and Wales,⁴ we calculate that some 750 eyes suffer significant visual handicap every year due to herpetic keratitis being inappropriately treated with topical steroids. Since the disease is usually unilateral these patients are rarely registrable as blind and so do not appear in official statistics. Most ophthalmologists believe—often strongly—that topical steroids should not be prescribed for ophthalmic use by general practitioners except after consultation.

We are aware of the limitations of this type of study but

nevertheless are encouraged that our mean figure for significant visual handicap in steroid enhanced herpetic keratitis correlates well with a study at a single hospital.⁵ The term “significant visual handicap” is vague but is, we believe, understood by ophthalmologists; and it obviated the need for a rigid definition which would have complicated replying to the questionnaire.

We believe that the current incidence of steroid enhancement of herpetic keratitis and its poor prognosis for vision are not appreciated and that all medical practitioners should take note. We can think of no ophthalmic condition requiring topical steroids which does not first merit the opinion of an ophthalmologist.

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USSR Letter

Morale among Soviet doctors

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In liberal democratic societies a range of actions are open to health care personnel who have become dissatisfied with their remuneration and conditions of work under a state run scheme. As a last resort professional organisations may recommend a withdrawal of services by their members, thus demonstrating freedom from government control. Fairly obviously, such a state of affairs cannot arise in the Soviet Union, given the nature of its political system.

It might be argued, however, that the causes of low morale will be more persistent and damaging when opportunities for pursuing collective action are denied to doctors. Evidence suggests that policies adopted by the Soviet authorities have led to what has become a widespread state of malaise, if not demoralisation, among their key health care personnel.

Since information released by the Soviet press comes under prior scrutiny political importance attaches to recent articles in which doctors report some of the problems created for them by the state's bureaucracy. Even more noteworthy is the fact that *Meditsinskaya*

Gazeta published a selection of complaints from readers with lengthy comments on them by the USSR health minister, Dr Sergei Burenkov.¹

Pay increase

One reason for discontent among rank and file doctors is their low salary, which reflects the priority assigned to their work, and can do nothing to discourage the prevalence of taking or soliciting gifts in cash and kind. Although that observation was certainly not made by the health minister, he did confirm that new levels of remuneration are now being worked out. Moreover, taking his cue from a correspondent, he expressed the view that the top of the scale should not be reached until after about 15 years' service instead of much earlier as at present. The notion of relating remuneration to an individual doctor's circumstances emerges from his statement: “There is a need to differentiate pay more clearly in respect of the character and level of difficulty of work performed.”

If the authorities are convinced of the urgency of such a step a substantial increase could be in prospect. Here an analogy can be drawn between the health service and education (where women outnumber men even more heavily). In 1984, as part of a major reform of schooling, the average monthly wage of teachers was increased by almost 35%.

Even if the increase turns out to be modest it is likely that many

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