Editorial: Beta-blockers and the eye

Beta adreno-receptor blockers have been in clinical use for more than 10 years and during this time they have proved valuable in the control of hypertension, angina, and dysrhythmias. Drugs with increasing selectivity have been introduced to allow control of cardiac receptors without producing unwanted side-effects from peripheral vascular disturbances or bronchospasm. Practolol was such a cardioselective beta-blocker which became available for general clinical use in 1970. During 1974 a unique clinical syndrome was described (Felix, Ive, and Dahl, 1974; Wright, 1974, 1975) in which a very small number of patients, less than 0.5 per cent of all treated with the drug, developed skin rashes, dry eyes with distinctive corneal and conjunctival signs, secretory otitis, and fibrous thickening of serous membranes leading to a fibrosing peritonitis and small bowel obstruction. These clinical signs were associated with the development of antinuclear antibodies and an antibody attaching to intercellular determinants (Amos, Brigden, and McKerron, 1975).

The most recent account of the histopathology confirms the distinctive features of the syndrome and clearly shows that it is not just another dry-eyed state, but that it is a fibrosing polyserositis with immunological and ocular aspects (Rahi, Chapman, Garner, and Wright, 1976).

After descriptions had been published on the adverse reaction attributed to practolol, a small number of case reports appeared suggesting that various minor ocular symptoms and signs were related to administration of beta-blockers other than practolol. In all cases the symptoms and signs were non-specific and none showed the unique features of the practolol-induced syndrome.

Patients needing this group of drugs are of an age when involution of the lacrimal gland, lid conditions—such as disorders of position of the lid edge or chronic infection—may produce minor and variable symptoms (Wright, 1976). It would seem quite impossible to link such non-specific complaints with administration of any drug and it would be unreasonable to compare them in any way with the very specific features of the practolol adverse reaction, particularly since it has been shown that patients suffering from the practolol-induced skin reaction suffer no cross-reactivity or clinical exacerbation on treatment with another beta-blocker (Felix, Ive, and Dahl, 1975).

Recent work has suggested that beta blockade may prove useful in the reduction of intraocular pressure although its exact place in the treatment of glaucoma has not yet been clearly defined.

Beta-blockers have proved a valuable group of drugs and although one has been shown to cause an adverse reaction there would seem to be no reason at present to incriminate all this group of compounds or to deny any patient treatment which promises to prolong or improve the quality of life.

References

———, ———, and ———— (1975) Ibid., 1, 626
——— (1975) Ibid., 1, 595
——— (1976) Ibid., 4, 577