

## HEADACHES AND MIGRAINE ASSOCIATED WITH EYESTRAIN\*

### PRELIMINARY REPORT OF A TRIAL OF CHLORDIAZEPOXIDE

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ONE of the most difficult therapeutic problems for the ophthalmologist at the present time is that of headaches associated with eye strain. The majority of these are associated with heterophoria and standard therapy has been disappointing. The initial response to drugs, *e.g.* atropine, and cholinesterase inhibition, has not been impressive and relapse after a while has been the rule.

Costenbader (1958) tried the effect of tranquillizing drugs in esotropia and found "they offer some hope for improvement". Chlordiazepoxide therefore seemed a drug which was worthy of study since it offered not only a tranquillizing but also a central muscle relaxant action. This is a preliminary report on the results obtained.

#### Patients Studied

The trial was undertaken in 36 patients with headaches and/or migraine associated with eyestrain.

29 of them had exophoria or esophoria of varying degrees of severity. The most seriously affected had exophoria of 16° and had received various forms of treatment for 25 years.

The remaining seven patients were suffering from typical ophthalmoplegic migraine with full aura and scintillating scotomata and each was suffering from severe migraine attacks at less than 2-weekly intervals.

The patients' ages ranged from 13 to 63 years. There were nine males and 25 females.

All the patients had errors of refraction and require permanent glasses and all had been observed for some time before the present trial.

#### Results

All 36 patients lost their symptoms after a few days treatment with chlordiazepoxide but there was no change in the degree of phoria. According to the patient's needs the dose had to be varied between 10 and 30 mg. daily.

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Some of the patients who ran out of capsules before their next visit found that the headaches returned in 4 to 6 days. In addition to this, 17 patients had dummy tablets substituted during therapy and all found that symptoms returned within a week.

At this rather low dosage side-effects have given no trouble at all and no patient has needed to stop therapy.

### Discussion

The results in these 36 patients are very encouraging, and it would appear that, although the effect of chlordiazepoxide is symptomatic and not curative, it gives excellent results while the patient maintains an adequate dosage. It is the most effective compound tested by us so far. Nevertheless, this report should be regarded as a preliminary one, the patients having so far been treated for a maximum of only 4 months. A full blind controlled trial is necessary and this is being planned.

These results agree with those recently reported by Fletcher (1961) in 51 patients with strabismus. She was studying the effect on the degree of heterotropia rather than the symptomatic improvement. The mechanism of action, and particularly the relative importance of the muscle relaxant component of chlordiazepoxide, is unknown and the new analogue diazepom, which shows greater muscle relaxant activity, would seem worthy of trial.

### Summary

36 patients with headaches and migraine associated with eyestrain have shown excellent improvement on chlordiazepoxide. The report is a preliminary one and further trials, both controlled studies and attempts to elucidate the mechanism, are planned. These preliminary results appear encouraging, particularly in a disorder which has proved so difficult to treat.

### REFERENCES

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