Glaucoma and Audiogram

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In connection with the fact, often mentioned in the literature, that a correlation exists between glaucoma and disturbances of the function of the labyrinth (especially Ménière's syndrome), 26 arbitrarily chosen glaucoma patients were subjected to an audiometric examination.

The results of this examination are summarized in the following table, in which the patients are divided into three groups according to the degree of "overall" perception loss (after correction for presbycusis and an eventual deficiency of conduction).

From this table (obtained from relatively small experimental material) the following conclusions can be drawn:

An "overall" perception loss of the auditory apparatus is common in patients suffering from glaucoma simplex.

The combination of glaucoma and loss of auditory perception is found more frequently in women than in men.

The loss of perception shows a closer correlation to the intraocular pressure (as judged by the number of operated patients and the number of operations) than to the loss of visual field.

Discussion.

Dekking: Possibly both glaucoma and the disturbances of the labyrinth could be caused by sclerosis. Does the audiogram confirm this causal relation?

Hagedoorn: a) Does one of the mentioned three groups of patients show a tendency to one particular form of glaucoma?

* A more extensive paper on the same subject will be sent to this journal for publication.

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b) You mentioned a connection between Ménière's disease and glaucoma. Are the hearing disturbances found in glaucoma identical with those in Ménière's disease?

ten Doesschate replied

to Dekking: Such a conclusion cannot be drawn from the audiometric data;

to Hagedoorn: a) Practically the whole experimental material consists of patients suffering from chronic simple glaucoma; it is therefore impossible to draw conclusions from this material as to the correlation between loss of auditory perception and certain forms of glaucoma.

b) None of the patients showed evidence of Ménière's syndrome. The "overall" perception loss is not typical of this syndrome.

Photochemical and Nervous Components of Visual Adaptation.

By J. TEN DOESSCHATE and M. A. BOUMAN (Utrecht).

Measurements of the chance of observation of brief light-flashes as a function of the diameter of the testfield for the dark and light adapted eye, combined with theoretical considerations based on van der Velden's 2 quantum hypothesis lead to the conclusion that the process of visual adaptation is not only governed by a change in concentration of the visual purple (photochemical component) but also by a change in the switching of the neurons (nervous component). Theoretically it is possible to separate both components in cases of pathological disturbance of dark adaptation.

A more extensive paper on the same subject has been published in *Oph-thalmologica* 126, 222–230, 1953.

Discussion.

Jonkers: It would be interesting to know if your conclusions would prove applicable to varying conditions of illumination of the testfield, i.e. in varying degrees of dark adaptation. Does not the so-called "retinal grey" cause disturbances in more advanced dark adaptation?