The Pupillary Lens (Iris Clip Lens)

C.D.

Binkhorst

Terneuzen

An Artificial Lens for Aphakia Completely Supported by the Iris (With Film and Demonstration of Patients)

In December 1958, at the 142nd Meeting of the Netherlands Ophthalmological Society, a preliminary announcement was made about a lens prosthesis for aphakia, kept in place by the iris diaphragm. 28 implantations with this lens have so far been performed. The iris-fixation has fully lived up to the requirements. 20 patients with unilateral aphakia have now been wearing the pupillary lens for six months to a year and a half with good functional results. 17 patients have a visual acuity of 6/12 or more, while in no case could a lower visual acuity be ascribed to the lens prosthesis.

TABLE Visual acuity of 20 aphakic eyes with a pupillary lens (iris clip lens) six months after implantation

$\approx \ll 1$

$7/8$

$6/60$

$6/36$ $6/24$ $6/18$ $6/12$ $6/9$ $6/6$ $6/4,5$

0

The Worth-test showed fusion in 16 patients.

Comparison between iris fixation and anterior chamber angle fixation (Strampelli, Dannheim, etc.) favours iris fixation, particularly for the following reasons:

there is no contact between the lens or its supports and the anterior chamber angle or the cornea, even when external pressure is exerted on the eye, so that corneal endothelium lesion and the so much dreaded "corneal dystrophy" in anterior chamber angle fixation is impossible;

there is always an ideal centering of the lens;

the pupillary lens is tolerated in a completely white and comfortable eye.

For a description of the pupillary lens, a comparison between anterior chamber angle fixation and iris fixation, for indications,

480 Binkhorst, The Pupillary Lens (Iris Clip Lens)

contra-indications, surgical technique and for the post-operative reaction and dealing with them, reference is made to the appropriate publications.

Binkhorst, C. D.: a) De implantatie van kunststoflenzen in het oog. Een nieuwe fixatiemethode: de pupillens of iris-clip-lens. Ned. T. Geneesk. 25: 1289 (1959). – b) Über die endgültige

Verträglichkeit künstlicher Augenlinsen bei der Aphakia und deren Verbesserung mittels Fixation der Linse in der Pupille. («Pupillarinse» oder «Iris-Clip-Linse».) Klin. Mbl. Augenheilk. 134: 536 (1959). – c) Iris-supported artificial pseudophakia. A new development in intraocular artificial lens surgery (iris-clip-lens). Trans. ophthal. Soc. U. K. 79: 569–584 (1959). – a) Results of implantation of intraocular lenses in unilateral aphakia. With special reference to the pupillary or iris-clip-lens, a new method of fixation. Amer. J. Ophthal. 49: 703–710 (1960). – b) Indikation und Implantationstechnik der «Pupillarinse» oder «Iris-Clip-Linse» bei der Aphakie. Klin. Mbl. Augenheilk. 136: 35–43 (1960). – c) Experience with implantation of various types of lens prostheses in unilateral aphakia. The pupillary lens or iris clip lens, a new method of fixation. Ophthalmologica (1960).

Discussion

Platzten: What is the specific weight of the lens and the clips?

Binkhorst: The weight of the total implant amounts to about 10 mg. The specific weight of polymethylmethacrylate is 1.19 and of supramid 1.13. The pressure exerted on the iris, whether by the force of gravity or centrifugal force, is so slight that there is no question of any deformation of the iris diaphragm. Actually under normal circumstances the fixation of the lens depends on the position of the posterior loops between the vitreous and the iris, while the anterior loops serve only as safeguards against luxation backwards under abnormal circumstances (excessive dilatation of the pupil, trauma).

Vos: As to atrophy of the iris sphincter, is there also an age limit?

Binkhorst: Atrophy of the iris sphincter would be a contra-indication for the implantation of an iris clip lens only if this were to make insertion impossible, e.g., in case of rigidity or if fixation were not practically certain to be successful. Senile sphincter atrophy is usually not a contra-indication.

Middelhoven: It has struck me that the optic part is in front of the iris. It would seem to me that the ideal would be approximated more closely if the optic part were to be behind the iris diaphragm. Or are there objections to this?

Binkhorst: Certainly placing the optic part of the lens behind the iris would have slight optic advantages but as objections I see: 1. greater surgical difficulties; 2. change of, at any rate partial, luxation of the optic part forwards; 3. more extensive contact between the lens and the iris.

Kok-van Alphen: To complete the picture I would like to mention 4 of our patients who were operated on by Dr. Binkhorst. The results were excellent. Two have 10/10 visus one 9/10 visus and one is a young traumatic aphakie who will now become a bus driver again.