

required, at intervals of from two to four weeks or more, time being allowed after each operation for the disturbed lens substance to be dissolved before another needling is done. The pupil must be widely dilated before operating, and its full dilatation kept up afterwards by instillations of solution of atropine sulph. grs. 2 to 4, ad  $\bar{3}j$ . two to four times a day, or p.r.n., for a few days.

[There seems to be some misconception in regard to dilatation of the pupil: The pupil is *fully* dilated only when its area nearly equals that of the cornea, the iris being reduced to a narrow circular rim. Sometimes after keratonyxis, and always after extraction, the pupil contracts somewhat owing to the escape of the aqueous, &c., and the aim should be to restore full dilatation—approximately at least—as soon as the anterior chamber is re-established, so as to prevent, if possible, engorgement of the iris, iritis, &c.]

If the eye becomes hard, either the aqueous should be let out by what is termed *paracentesis cornea*, the anterior chamber being tapped by passing a broad needle through the cornea near its periphery below or at the outer side; or, preferably in most instances, the cataract should be removed by *linear* extraction. If after the lens has been got rid of, the posterior capsule is found opaque (secondary cataract), it should be divided with a needle as soon as the eye is free from irritation.

October 9. First needling done; child under chloroform; pupil fully dilated; lids separated by spring stop speculum; eye lightly steadied by forceps; fine cataract stop-needle passed with a light jerking movement through the outer part of the cornea, made to enter the centre of the lens, and rapidly withdrawn from the eye, which was then closed with straps. The mother was instructed to apply the atropine on the same evening, and afterwards three times a day, or often enough to maintain full dilatation. October 12. "No reaction; no ciliary congestion; pupil well dilated; tension normal. October 30. Keratonyxis repeated. November 20. Third needling done. January 4. Fourth needling. February 12. The secondary opaque capsular membrane remaining after absorption of the the lens was divided with the needle. February 15. The

patient discharged with a large clear central pupil. Atropine to be stopped in a few days.

*Linear Extraction.*—Here is another case for your inspection; patient, æt. 13. The cornea appear alike normal, the irides healthy, and the pupils circular, active, and black. The vision of the right eye is  $\frac{20}{20}$ ; that of the left,  $\frac{7}{10}$ , but with a strong lens, +  $3\frac{1}{2}$ , becomes  $\frac{10}{30}$ . Well, as you may suspect, the left eye has lost its lens, which has been removed being cataractous. Concussion of the eyeball, caused by the impact of a snow-ball a year or more ago, was probably the cause of the cataract, which likely developed soon afterwards, though the boy only found out recently that the eye was blind. When first seen the eye appeared as it does now, except that the pupil was gray. The tension and field of vision were normal, and the position of windows and of a lamp-light could be made out. June 14th, the patient being under chloroform, and the pupil fully dilated, "needling" was done, the capsule being freely divided, and the lens broken up. Straps were then applied to the lids, and after a few hours removed and a 4gr. sol. atropiæ instilled. The next morning the pupil was found well dilated, and there was no reaction, the eye being free from congestion and pain. The pupil was kept widely dilated by the use of the 4gr. sol. atropiæ four to six times a day. The lens substance gradually became flocculent and swollen so as to project beyond the plane of the iris; but the tension, which was tested from time to time, did not become abnormal. July 3rd, *linear extraction* was done: the patient being anesthetized, the lids separated by speculum and the eye held by fixation forceps applied at the insertion of the internal rectus, a vertical cut was made with a straight keratome through the cornea about a line from its outer margin, and two lines long, the knife being inclined so as to make an oblique wound with the inner lip well within the enlarged pupil. The cystitome was then inserted, and its point passed over the lens so as to insure thorough division of the anterior capsule. The cataract was then evacuated by making slight pressure with the forceps, still in position, while the cut was made to gape by pressing back its outer lip with the curette, which was also carefully