was about the same as it was in left eye, 20/70. He admitted that vision had always been bad in both eyes since he could remember. His mother and father both died of tuberculosis, mother living two years after contracting it. Had one sister who died of tuberculosis, living only three months after contracting the disease. One brother living, but delicate. The patient had always been healthy save for an attack of typhoid fever two years before, from which he recovered, except that his left eye remained red for some months, and since then it becomes red every now and again. He denies syphilis, but admits one attack of gonorrhea five years since. He was refracted under homatropin but vision could not be improved in either eye with lenses.

Patient gave the following history: One year ago he was hit over right eye and forehead with a stick of wood 2x4 inches. He became unconscious and remained so for 26 hours. There was profuse hemorrhage from the nose and he vomited a large quantity of blood. He states that he was totally blind in right eye for three weeks. He was discharged from hospital after remaining there for three months. He then did light work and his vision gradually returned to what it is now. He has had constant headache just above the bridge of the nose.

Examination of eye showed cornea normal, pupil considerably dilated. Iris reacted very slightly to light and convergence. A small opacity of lens showed at the periphery, at about eleven o'clock. Vitreous was clear.

At the macular region there was an excavated spot a little more than half the size of the disc, deep red in color and mottled, with sharply cut edges and from a half to one millimeter in depth. Cholesterin crystals were imbedded in the surrounding retina in close proximity to the hole. There were none in the vitreous. There was a large scotoma. The nerve head was normal.

DATURIN, A CYCLOPLEGIC MYDRIATIC.

EDWARD JACKSON, M. D.

DENVER.

When the present war broke out one of the first drugs to increase enormously in price was atropin. The increase was not due to the fact that it was all made in Germany, but to the dependence of American manufacturers for their supply of a crude drug belladonna upon importation from Europe.

Meanwhile the commonest of weeds on the vacant lots of most of our cities is the *datura stramonium*, or "jimson weed" (Jamestown weed). An unlimited supply of it is at hand. All parts of the plant contain the active principle—the alkaloid daturin, chemically identical with atropin, and pronounced physiologically identical by some of the most careful investigators who have studied the subject. The leaves and seeds were long ago recognized in the U. S. Pharmacopoea.

My own comparative studies of it, published many years ago, seemed to indicate that its actions on the eye were the same as those of hyoscyamin and duboisin. But that, if these were not exactly identical with the action of atropin, that daturin was more nearly similar to atropin than either of the others, in that it acted rather more slowly and was accompanied by less constitutional disturbance.

A good deal of clinical experience with daturin shows that its mydriatic cycloplegic and therapeutic properties are indistinguishable from those of atropin. It is a drug not generally referred to in the text books on ophthalmology, and one that has never been exploited by manufacturers who had succeeded in controlling the market for the raw material. Being sold in comparatively limited quantities its price at the outbreak of the war was five or six times higher than that of atropin. But since the latter has equalled or surpassed it in price there seems to be no good reason why daturin should not come into much more general use.

It is certain that the American supply of the drug could never be interfered with by foreign war. And if it were commonly used the increased demand, with the free supply of raw ma-

terial, would certainly bring down the price. It seems to be simply a question of fashion or custom in the medical profession, as to which they will use or prescribe.

SOCIETY PROCEEDINGS

NETHERLANDS OPHTHALMOLOGICAL SOCIETY.

June 9-10, 1917.

DR. NICOLAI in the Chair.

Translated from the *Nederlandische Tijdschr. v. Geneeskunde* by E. E. Blaauw, M. D.

The oration, which C. U. Ariens Kappers gave by invitation "About Phenomena of Neurobiotaxis of the Optical System" has already been published (p. 518).

The Dilatator of the Pupil.

NICOLAI spoke on the dilatator pupillae with demonstration of the fibers believed to exercise such a function.

DISCUSSION.—Rochat objects to accepting as the cause of the dilatation of the pupil the rare dispersed fibers of Nicolai. The membrane heretofore considered as the dilatator can be observed especially well in the calf's-irides, after the colored pigment layer is removed. A compact membrane of smooth muscle is then seen extending over the entire back of the iris. It is much easier to understand that this membrane produces dilatation of the pupil, rather than the rare muscle fibers of Nicolai. The reaction of van Gieson is not enough to recognize cells as smooth muscular fibers.

Nicolai denies the thinness of the fiber groups which he has described as a dilatator. He seriously doubts the muscular nature of the membrane of Henle on account of the dubious staining, by methods recommended for muscular tissue.

De Kleijn considers the physiologic arguments against the existence of the dilatator pupillae at the location of the earlier investigators not entirely sound.

The objection of an ectropion pupillae during narrowing of the pupil, because then also a contraction of the antagonist occurs, is not real. During late years, from the investigations especially of Sherrington, it seems that during contraction of a muscle the antagonist does not contract, but actively relaxes. It must yet be investigated if this is also valid for the sphincter and dilatator with their peculiar innervation. The existence of a pupillary dilatation at a time that the dilatator is not yet formed, can be explained very well thru loss of tone of the sphincter thru atropin. Nicolai accepts that as a rule tonic tension of the antagonist occurs during contraction of a muscle, and that also an innervation of the dilatator occurs during contraction of the sphincter.

De Kleijn considers this opposed to Sherrington's investigations, and he can add the observation of an active relaxation of the internal rectus in nystagmus, accompanied with the contraction of the external rectus.

Panophthalmitis from Gram-negative Diplococci.

J. van der Hoeve observed a 14 year old boy with a rather mild conjunctivitis, in which abundant diplococci were found in smears which proved in cultures gonococci. After one day of treatment no gonococci could be found, and after 5 days the boy was entirely well. He points out the importance of bacterial investigation, as this boy could very well infect people with less resistant conjunctivas.

He then demonstrated Gram-negative diplococci which have not before been described in connection with the eye. These had produced in one child