IRITIS SPONGIOSA.

Presented to the Section on Ophthalmology, at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colo., June 7-10, 1898.

BY ADELINE E. PORTMAN, M.D.

WASHINGTON, D. C.

Prior to 1870 almost nothing is found giving more than two forms or divisions of iritis, it being classed either as syphilitic or rheumatic, there being only three forms of exudations given in the so-called parenchymatous, namely, serous, plastic and suppurative, the clinical history, cause, treatment and termination being distinct in the type.

Serous.—Develops slowly; no pain; normal pupil or slightly dilated; little or no injection of vessels and long duration; usually shows punctate deposit on posterior surface of cornea; aqueous humor cloudy; ends without adhesions or serious effects. Treatment expectant, hygienic and constitutional, according to causes found.

Plastic.—Pain pronounced; onset rapid; pain referred to frontal and other branches of fifth pair, worse at night; circumcorneal injection, photophobia and lachrymation; pupil contracted; iris discolored and engorged, may be nodules upon its surface; exudation of lymph and iritic adhesions follow. Treatment: antiphlogistics, mydriatics and sometimes mercury.

Suppurative.—Iris very much swollen, yellowish tinge, and formation of new vessels in its substance; hypopyon forms; pain and inflammation symptoms much the same as in plastic. Prognosis usually good.

Though quite distinct types, these three forms may merge into one another, giving rise to seroplastic-plastico-suppurative, though rarely, if ever, a sero-suppurative form. Each form may pass over to the ciliary body and choroid, making other combinations and forms of disease.

After 1870, a few cases of a form of iritis were reported, that from the character of the exudate were called iritis spongiosa, but no full description being found in any text-book up to 1880, Dr. Swan M. Burnett of Washington, D. C., after having a very severe case under his care, took pains to collect the cases then reported—less than forty in all—to give, if necessary, for future guidance of others, a name to so peculiar a form. Schmidt is the first to have mentioned it, but under the head of simple iritis, of which Wecker makes mere mention in 1879.

The clinical picture is pain, which, at its height, is as acute as in the plastic form. Up to the time the exudate appears, it is not so intense, but after the exudate begins, till absorption takes place it is very severe. The sudden relief from pain when absorption begins is a marked peculiarity of this form of iritis. Exudation begins with marked symptoms of irritation, in many cases very suddenly. At one visit anterior chamber is clear, at the next, is filled with a gray mass of exudate. In others it is extruded more slowly, usually begins in or below pupillary space and in most cases fills anterior chamber. Very likely absorption had begun in cases said to be only partly filled. Absorption takes place with varying rapidity, generally five to eighteen days elapsing before all traces have disappeared. The course of absorption is very peculiar, and characteristic. It begins always at the periphery, and the mass gradually diminishes from all sides equally, the pupil being last to clear.

As to the character of the exudation, it has been found on examination in its earlier condition, fibrous.

Knapp, who first examined it, says: "It consists of a dense network of very delicate fibrils inclosing white and red blood corpuscles and of a finely granular substance." His opinion is that when the substance is uniformly semitransparent (hyaline, gelatinous, like a dislocated lens) it probably consists exclusively of coagulated fibrin; if gray, or whitish gray, white corpuscles, which collected in clusters appear like whitish dots; yellow or yellowish green tinge indicates red blood corpuscles. Alt says: "The exudation has two well-defined parts, the one perfectly homogeneous, like the gelatinous exudation; the other, lens-like in shape, consists of a net-work of exceedingly fine threads of fibrin, the meshes of which were filled with exudation. The two layers are the two stages of exudation so-called, at first spongy, then gelatinous." The unchanged appearance or nearly so of the iris precludes the possibility of extravasation of blood into its tissues, the iris having its normal luster, and as soon as the attack passes it is seldom discolored or changed in appearance, which would not be the case if the blood had been extruded.

Diagnosis: As soon as the exudate appears there is no difficulty in deciding that we have to do with spongy iritis. The difficulty is not to confound it with diffuse keratitis or a lens dislocated into the anterior chamber. The excessive chemosis is not present in diffuse keratitis, and oblique light shows epithelium intact. When absorption begins, the sharply defined edge of the mass appears so exactly like a luxated lens that only a magnifying glass and oblique light quickly shows the error. A fibrous mass in some of its parts, lack of regular outline, and peculiar mode of absorption, proves iritis spongiosa. The typical form leaves iris free and normal, but it may be joined to plastic form and adhesions result. No cases united to serous or suppurative forms is known. As to etiology, it may arise from any of the causes of iritis—traumatic, rheumatic or syphilitic. The great majority of cases reported were males.

Prognosis in typical form good. Treatment as in plastic: antiphlogistics, mydriatics, anodynes and hot applications. Absorption is naturally so rapid that mercury is not of benefit unless indicated by some dyscrasia. The last case seen will give a perfect picture and history of cases in general.

I. J., colored, female; seen first Jan. 9, 1898. Exudation in anterior chamber of left eye, down and outward from pupil, reaching slightly beyond pupil, which was small and adherent. First noted trouble in the eye ten days before; pain and usual symptoms of iritis. No history of syphilis. January 11, under atropin; pupil dilated somewhat, but irregularly; exudate about the same. January 12, the edge of exudate, which before had been undefined, is today sharply defined at the upper margin, the anterior chamber above it being clear and showing the pupil enlarged, but still some adhesions. January 13, only a small quantity of exudate downward and outward. January 14, no trace of exudate; pupil larger; no pain. January 16, eye clear and vision about the same as before the attack. This is as nearly as may be a typical case, though the exudate may be much longer in being absorbed. This type, when once seen, will not be forgotten, though from any text-book it has been my fortune to examine, one may not get even an idea of its real appearance.

BIBLIOGRAPHY.

- Wecker: *Therapeutique Oculaire*, 1879.
 Schmidt: *Klin. Monatsb. f. Augenheilk.*, 1871, p. 94.
 Gunning: *Klin. Monatsb. f. Augenheilk.*, 1872, p. 7; three cases.
 Gruening: *Archives, Oph. and Otol.*, Vol. iii, p. 20.
 C. J. Kipp: *Archives, Oph. and Otol.*, Vol. iii, p. 71.
 Knapp: *Archives, Oph. and Otol.*, No. 1-2, in paper on Cataract; five cases.
 Knapp: *Archives, Oph. and Otol.*, Vol. vii, p. 49.
 Alt: *Archives, Oph. and Otol.*, 16—No. 3 and 4, p. 365. Exam. Substance.
 Burnett: *Amer. Jour. Med. Sci.*, January 1880.
 722, 18th Street, N. W.