

pointed tack, or fine spicula of metal or glass, &c., and the whole lens will soon almost inevitably become opaque or cataractous. In very rare instances of violence the opacity is confined to the site of the injury or is quite localized; but it is well in all cases to act on the presumption that it will become general. The following case illustrates some points in regard to cataract due to traumatism.

Sept. 26th. R. F., æt. 21, private patient,* Toronto General Hospital; received charge of blank cartridge in his face at Volunteer review, Montreal, forty-eight hours previously. Cold or ice-water applications had been constantly used. The patient was free from pain, but still suffering from the effects of shock. The left half of the face was closely peppered with powder. Two or three grains were embedded in the sclera of right eye; and others, removed by the friction of the lids, had struck the lower part of the cornea. There was slight ocular congestion and moderate photophobia. The lids of the left eye were swollen, and were with difficulty separated. Several grains had entered the left sclera and cornea, one penetrating the latter. There were, chemosis of ocular conjunctiva, ciliary congestion, discoloration of iris from hyperæmia, and a narrow band of iris (anterior synechia) reaching from outer edge of pupil to the wound at the outer middle third of cornea, the lips of which were infiltrated and ununited; pupil, medium-sized and gray from cataractous lens; tension, below normal; can see large objects to the left. To have atropia, 4 gr. ad. $\frac{3}{4}$ j. instilled every three hours, and the ice-water applications continued. Atropized oil* was used for a few days after removing the powder from the cornea by means of the spud, the aqueous solution being then employed. The right eye showed no signs of irritation from the presence of the

particles in the sclera, and required no further attention than the use of cold water for a few days and a few instillations of atropine. The pupil of the left eye yielded but slowly to the mydriatic, June 2nd, being dilated only one-half, with some adhesions to the lens capsule (posterior synechia); the lens being opaque and swollen, but the tension not yet normal (— T); eye moderately congested but free from pain. June 5th. The corneal wound healed; anterior synechia ruptured by mydriatic; pupil two-thirds dilated, and almost circular, the lens-matter protruding through it and almost touching the cornea; tension, normal, having risen the last two days; only slight circumcorneal (ciliary) congestion; no pain or tenderness; can discern when the hand is moved to and fro: did *linear extraction* making the incision in the corneal cicatrix; used cystitome to insure thorough division and retraction of the anterior capsule. The lens substance escaped readily by the curette, and the pupil became pretty clear. The cut was gently cleared of debris, and also the palpebral sac; dropped in some 4 gr. ad $\frac{3}{4}$ j. sol. atropia, and put a light bandage on both eyes: ice-water to be applied; straps to be removed in six hours, and the atropine applied every hour for four hours, and hourly in the morning. June 6th, 9.30 a.m. Eye became painful at 10 p.m., and pil. opii given; not suffering now; general congestion of the eye, more conjunctival than ciliary; lips of wound coapted, and anterior chamber re-formed; pupil only one-third dilated; globe soft (— T¹), but not tender. To apply 8 gr. ad $\frac{3}{4}$ j. sol. atropia sulph. every hour during the day, and twice in the night, continue cold water, and give hypodermic of morphia and $\frac{1}{8}$ gr. of atropia at bed-time, or p.r.n. June 7th. No pain or tenderness; pupil one-half dilated and clearer; can see articles about the room; can get up to-morrow; continue cold water, and use the 8 gr. sol. atrop. every two hours. June 10th. Pupil two thirds dilated; V = $\frac{1}{10}$: use 4 gr. ad. $\frac{3}{4}$ j. atropia sol. every three hours. June 12th. V = $\frac{1}{10}$. June 14th. Trifling ocular congestion; pupil well dilated; large, clear central opening encircled by opaque thickened capsule; tension normal (Tn); with + 3 lens

* Seen in consultation with Drs. Thorburn and Bethune.

+ The alkaloid itself should be dissolved in hot absolute alcohol, gr. j. ad. minim, and incorporated in pure bland castor oil, the spirit being then expelled by gentle heat: or ether may be used without heat. The atropized oil is superior to the aqueous solution in exposure of the corneal nerves from abrasion or ulceration, and in effecting prolonged contact of the mydriatic with the eye.