

of the removal of the ovaries in very extreme cases. I have not satisfied myself as to the complete justifiability of this operation. I suppose, however, there are some few cases demanding it. As yet I have not met with them.

—♦♦♦—

THE NEW LOCAL ANÆSTHETIC, HYDROCHLORATE OF COCAINE—EXPERIMENTS WITH CAFFEINE.

BY R. A. REEVE, B.A., M.D.

Senior Ophthalmic and Aural Surgeon to Toronto General Hospital.

President, Toronto Medical Society, &c.

It is not surprising that the virtues of a drug which is at once absolutely non-irritating and equally anæsthetic to the conjunctiva and urethra, the cornea and drum head, and the mucous membrane of larynx, naso-pharynx and rectum, etc., should be promptly and widely tested and heralded. The various indications it fulfils are so apparent as hardly to need specifying.

The following cases illustrate in part its potency, and one is cited, not without interest, in which it proved useless. The solution used was of four per cent. strength, the two per cent. having been found too weak, as a rule, for operations upon the eye:

Case 1.—J. A., Toronto General Hospital. *Iridectomy*, Nov. 11th. Four applications in fifteen minutes; operation begun twenty minutes after the first one; no pain—"just felt the doctor was doing something."

Case 2.—J. T. T. *Sclerotomy for secondary glaucoma*; Drug useless: six instillations (of several drops) in twenty-five minutes; operation attempted five minutes later, but patient not tolerating the use of forceps or knife, had to be done under chloroform. The patient was a very nervous subject, and there was possibly idiosyncrasy in addition to evident hyperæsthesia.

Case 3.—Mrs. McC. *Operation for secondary cataract*. Solution applied three times in ten minutes; operation, dissection, ten minutes later. The patient, a nervous lady, said she "felt not a bit of pain."

Case 4.—Mrs. T. *Mucocèle*. Bowman's opera-

tion: Three applications on punctum and near inner canthus; canaliculus slit as far as caruncle without pain, and into sac with but little; pupil moderately dilated, but contracting to light and on accommodation.

Case 5.—Mrs. M. *Iridectomy for inflammatory glaucoma*. Five instillations directly upon cornea (upper margin) in fifteen minutes; operation begun five minutes later. Section through sclero-corneal junction not felt; solution dropped upon wound in which a knuckle of iris had engaged; two or three minutes later segment of iris excised. The patient, a delicate, nervous lady, said she "only felt the operation a little."

Case 6.—M. C., aged 3½ years. *Staphyloma of cornea—Incision*. Fifteen minutes after a single instillation the cornea was incised, without complaint.

Case 7.—Mrs. O. The galvano-cautery was applied to several points on the septum and turbinates a few minutes after the use of the solution, without pain. (Some transient neuralgia of superior dental nerves.)

Case 8.—*Ulceration of larynx*. A two per cent. solution gave marked relief of irritability.

Case 9.—*Inflammation of auditory meatus*. Solution dropped into ear. Tenderness and pain sensibly relieved—"a sort of numbness."

Case 10.—E. L., Toronto General Hospital. *Iridectomy*. Five applications in forty minutes; operation ten minutes after the last; section of cornea not felt; traction upon iris gave some pain.

Case 11.—*Pterygium*. T. G. H. Four applications; abscission and suturing practically painless.

Case 12.—N. M. Z., *Strabismus*. Four applications in fifteen minutes; tenotomy done five minutes later; moderate pain caused by traction of hook upon muscle but none by scissors.

Under cocaine, extraction of cataract is not more painful than iridectomy. More frequent applications or stronger solutions than four per cent. may be found to anæsthetize the iris—a safer plan, it would seem, than injecting into anterior chamber. Cocaine may be used to prevent, or mitigate, the after-pain of operations on various parts, and lessen the risk of