

RECENT ADVANCES IN OCULAR THERAPEUTICS.*

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THE time was not so long ago when the ophthalmologists had but few drugs to rely upon to combat the special diseases of the eye. Atropine, eserine, and more recently cocaine constituted his main support. Now; however, an array of pharmacal preparations and numerous alkaloids, are at hand to aid his surgical skill. For convenience of description I propose to divide these therapeutic agents as follows:—

1. Local anesthetics, (a) superficial, (b) deep.
2. Drugs acting specially upon the iris and ciliary muscles.
3. Drugs affecting the vascular condition of the eye.
4. Astringents and antiseptics and other general remedies in their local application.

Class 1. *Cocaine* cannot be used in all cases with perfect safety. Its action has precipitated attacks of glaucoma and the shedding of large portions of the corneal epithelium have been recorded. It is toxic in some persons, even when applied to the conjunctiva, causing faintness. It lowers the nutrition of the cornea and its use in corneal ulcers should be guarded. The anesthesia produced is somewhat superficial.

Eucaine is less toxic than cocaine but is irritating and painful when applied to the conjunctiva. Its anesthetic effect is about equal to cocaine. It should be used in a 2 or 3% solution, but can be used stronger without ill effect.

Tropocaine is also very painful but its anesthesia is deep and lasting.

Holocaine is a powerful anesthetic, but is more toxic than cocaine.

Stovaine is an ideal local anesthetic, it produces a deep and lasting anesthesia and is free from poisonous qualities so that it may be injected freely under the conjunctiva, but produces a good deal of smarting before its anesthetic effect is produced.

Alypin is the local superficial anesthetic par excellence. It does not cause dilatation of the pupil or paralysis of accommodation, nor has it any toxic effect. It is not very deep in action nor very lasting in anesthesia.

Dionin is a powerful sedative, hypnotic and lymphagogue and is of great value in episcleritis, iritis, irido-cyclitis, glaucoma and corneal opacities. Its later beneficial effect is caused by its lymphagogue action by which absorption is rapidly produced. I have seen most remarkable cures by its use in opacities of the cornea. In effusions of blood or lymph into the vitreous it produces rapid absorption. I have seen an interior chamber full of blood clear up in twenty-four hours under its influence. It may be combined with atropine, adrenalin, or cocaine. I regard it as one

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