

Either of the following prescriptions will meet the indications of a mild eye-wash :

1. A solution of common salt (grs. x ad ʒj).
2. A saturated solution of boracic acid (grs. xv ad ʒj).
3. R. Sodii biboratis ʒiv, aquæ camphoræ, aa ʒij. M.
4. R. Zinci sulphatis gr. j, acidi boracici ʒ3, aquæ ʒiv. M.

These may be freely applied to the eye, without fear of harm. As examples of what I consider the stronger eye-washes, I may cite solutions of copper, of zinc, of alum, of nitrate of silver, of acetate of lead, as strong as five or ten grains to the ounce.

The next disease of the eye in order of frequency is inflammation of the cornea, or *keratitis*, which is sometimes associated with catarrhal ophthalmia just considered, and in many instances the casual observer will place the two diseases in the same category. And yet, the strong applications, which the inflamed conjunctiva would stand, not only with impunity, but with marked benefit, might seriously endanger an eye afflicted with keratitis. Here treatment *must be mild*, if safety of the eye is consulted. Any one of the prescriptions which I have suggested can be used with benefit and without danger, and it is well to use in addition some soothing application as R. Atropiæ sulphatis, cocain. murat. aa gr. ij, aquæ ʒj. M. Sig.—Put two drops in the eye three times a day.

Another disease of the eye—inflammation of the iris, or *iritis*—is often seen, and it, too, has so many symptoms in common with the diseases already considered that it is liable to be mistaken for either. Here all the usual eye-washes are objectionable—their danger increasing with their astringency. The prescriptions which I have given are at least open to this objection—and while they can do no good, they can hardly be considered as dangerous. The sheet-anchor here is atropia, which can be advantageously combined with cocaine, four grains each of cocaine and atropine to the ounce of water. This should be used sufficiently often to keep the pupil dilated, and until the eye is free from redness. Attention of course should be given to the general health in every instance. Either the syphilitic taint or the rheumatic habit will usually be found with iritis. Whenever the eyeball is red and inflamed, with dread of light, or haziness of the cornea, or a contracted or sluggish pupil, rely upon atropine and cocaine, and use no stronger application than a solution of boracic acid. When an absence of these symptoms shows that the trouble is in the lids, stronger applications are admissible.

A few points about the diseases of the ear, and I shall cease.

Ordinary *ear-ache* is an inflammation of the middle ear, and when the process goes on to pus-formation, an abscess on the inner side of

the drum membrane is the result. The pressure from the pent-up pus causes a rupture of the drum, through which the matter escapes. This is often an end to the trouble, but frequently the inflammation continues—the opening in the drum remains—disease of the bones of the ear develops, and a more or less continuous discharge, an otorrhœa, is the result. If hot water be liberally and frequently injected into the ear through a douche, the inflammation will usually be stopped and a cure effected. Two or three drops of hot laudanum dropped into the ear will often accomplish the same purpose. After the discharge appears it can ordinarily be checked by syringing the ear often enough to keep it clean with warm water containing boracic acid in the proportion of fifteen grains to the ounce; and if, in addition to the syringing, a little pulverized boracic is blown into the ear through a quill or tube, after the ear is cleansed, this treatment will usually suffice to cure an otorrhœa.

In removing plugs of wax, or foreign bodies which have gained access to the ear, it is better to rely upon some warm water and a syringe, than resort to instruments. It is not only easier but more efficacious and safer. With the most delicate touch, it is as difficult to handle an instrument with precision in the deep and small cavity of the ear, as it is to avoid inflicting injury to those delicate parts which may be more serious than the trouble for which it was undertaken.—Dr. James L. Minor, in *Memphis Jour. of Med. Science. Med. Summary.*

THE PROPER TIME TO ADMINISTER QUININE.

In the *Annales de Thérapeutique Médico-Chirurgicales*, July, 1890, Charpentier gives the following directions as to the administration of quinine:

1. The action of quinine is chiefly felt about six hours after its ingestion, and for this reason it should be given, not at the time of an expected malarial paroxysm, but six hours before.
2. In the case of quotidian fever the quinine should not be given six hours before the chill, but eight hours before, so that the full effect may be present two hours before the chill, for though the chill is the apparent onset, the real onset is still earlier.
3. When the fever is tertian, Charpentier thinks that the quinine should be used twelve hours before, and where it is quartan, eighteen hours before the attack is expected.

The drug should be given in massive doses, not in fractional doses, for the reason that it is rapidly eliminated by the urine, and in small amounts would have no effect; although when the stomach is too irritable to stand heroic amounts, fractional doses should be given every three-quarters of an hour.