

the growth of the nose bones is furnished; and the nose bones, with the orbit, obtain their size and shape as performed in embryo, except in so far as they have been influenced by contrary external conditions, and, among these, nasal stenosis. I would even go further and find in this unsymmetrical development of the orbit, one of the causes of want of equilibrium in the eye muscles, giving rise to hyper-, ex- and es-ophoria—especially the first of the three.

Among the *inflammatory affections of the eye*, which are of so frequent occurrence in children suffering from post-nasal adenoids that a connection between the two may be considered as beyond question, may be mentioned phlyctenular keratitis, phlyctenular conjunctivitis, catarrh. conjunctivitis, marginal blepharitis, and eczema of the lids, which last may even extend over the whole of one side of the face, and often is combined with eczema of the outer ear.

The *phlyctenular troubles* deserve a few words. The last articles on these troubles, in discussing their etiology, mentions "age, occurring chiefly in children," "unhygienic surroundings," "astigmatism," "bad and improper food," as the probable causes. While it is true that phlyctenes occur most frequently in children whose surroundings are "unhygienic," it is doubtful, to a high degree, if astigmatism has anything to do with their production; nor has "bad and improper food," further than that "bad and improper food" tends to lessen resistance to disease; nor will youth and unhygienic surroundings produce phlyctenes of the cornea or conjunctiva. In the vast majority of cases of children suffering from phlyctenular troubles, there will be found a coincident rhinitis, and behind this, unhealthy adenoid vegetations. The picture presented by these cases is so characteristic, that once recognized, it is not easily forgotten.

*Phlyctenes and a Running Nose.*—Generally the child has "had a cold for a long time" before the eye trouble begins. Some writers believe that scrofula predisposes to phlyctenular eye inflammations. It is true that the phlyctenes occurring in scrofulous children are more obstinate to treatment, have a greater tendency to recur, and to produce more lasting damage to the eyes, than do those occurring in non-scrofulous children; but this is only because the improperly treated rhinitis of scrofulous children is severer in its manifestation and more lasting in point of time than is the improperly treated rhinitis occurring in non-scrofulous children. In the majority of cases of phlyctenular troubles in children, where the affection is confined to one eye, it will be found on examination that the rhinitis on that side is apparently greater in degree than on the other side; i. e., that the discharge from the nostril on the side of the phlyctenular trouble is more pro-

fuse than that on the other side. This may be due to one or both of two causes—either the rhinitis is really more severe on this side, perhaps from some anatomical intra-nasal condition; or the two sides of the nose, having been at first equally affected, the second side has become more inflamed after the appearance of the phlyctene in the eye; for the phlyctenular affections cause a hyper-secretion of tears, and of a nature often severe enough to inflame, even to bleeding, the skin of the outer canthus of the eye, and a greater proportion of these tears are carried into the nose, where their irritant action upon the nasal mucous membrane will readily produce excessive acute catarrhal discharge from the mucous membrane.

It is highly probable, then, that the excessive discharge from the nostril on the side corresponding to the eye affected, is due to the hyper-secretion of tears. This is rendered even more probable when one considers the cases of acute monolateral, non-purulent conjunctivitis, which are accompanied by a severe monolateral rhinitis.

The *cause*, then, of phlyctenular eye affections in children, in the vast majority of cases (I can imagine other causes), is to be sought in the catarrhal condition of the nose—in the catarrhal discharges therefrom, which, in turn, are due to the unhealthy conditions of adenoids present in the post-nasal space. Whether the phlyctenular trouble be due to the germs which find a culture medium ready prepared in the altered and often stagnant secretion of the nasal spaces, or to a chemical product, the result of disorganizing changes in these nasal discharges, I am unprepared to say; but that it is due to one of the two, I feel convinced.

The mode of transference of this secretion from the nose to the eye may be either through the lachrymal canal, which, I think, highly improbable; or directly from the nostril entrance into eye externally, either by the child rubbing the nose and then the eye, as he is frequently seen to do, or through the agency of the pocket handkerchief, or by the pillow becoming saturated for a certain space with the nasal discharges while the child is asleep, and then the child turning over, so that the eyelids touch this space. This latter, i. e., moistening of the pillow with the discharges from the nose in these cases, is often. It is probably the cause of the moist eczematous condition of the posterior aspect of the auricle, and of the lobe of the ear which is found accompanying, not infrequently, phlyctenular conditions of the eye. It is not the rule for phlyctenular troubles to occur where the parents are at all careful about removing the discharges from the nostril-openings as soon as they appear, and where they teach the child to keep his nose as clean as he can. These troubles occur chiefly where the children have been greatly neglected, owing either to the ignor-