THE RELATION TO EXTERNAL EYE AND ORBITAL DISEASE OF DISEASES IN THE NOSE, THROAT AND EAR*

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It is not so very long since ophthalmic surgeons were also general surgeons, and the work of such men as Bowman, Hutchinson and Tay show the advantages they possessed even in their day by examining all parts of the body. The amount of literature on the present subject now appearing shows that ophthalmologists are again awakening to the need of a broader view of their responsibilities. The day of indiscriminate mercury and pilocarpine lingered too long with us. To-day we want to know in each case the cause of eye disease, and, more and more, we seek it in other parts of the body. The bacteriology of the eye is doing much to point to cause and treatment, for the similarity of the fauna of the eye with that of the nose and mouth is striking. The relation of staphylococcic infection of the conjunctiva and cornea with adenoids and nasal suppuration is well known. The pneumococcus, by far the most important organism in the etiology of hypopyon ulcer, and of disease of the lacrymal sac, and a frequent cause of conjunctivitis, is usually to be found in the mouth; whereas Axenfeld was able to find it only twice on healthy conjunctiva, in fact only the zerosis bacillus and the staphylococcus albus are to be found thereon. The diplococcus of Morax and Axenfeld, the common cause of chronic and angular conjunctivitis, and of catarrhal ulcer of the cornea, was found by Treacher Collins in the nasal secretion of 125 of 300 school children with conjunctivitis, and Erdmann found them in 64 out of 142 noses, the majority apparently healthy, without co-existing conjunctivitis. He showed that they could live in dried nasal secretion for several days, and proved by inoculation that they still maintained their virulence. Axenfeld found them in sores at the angle of the mouth.

In many such cases the nose should obviously be treated also. Infection of the conjunctiva, however, is not easy. Bach has shown that bacteria cannot ascend the healthy nasal duct, although inflammation can extend *in continuo*, and nasal infection, by obstructing the tear passages and producing hyperaemia of the conjunctiva predisposes it to infection. Diphtheria rarely

*Read before the Section of Ophthalmology and Oto-Laryngology of the Academy of Medicine, Toronto, December 16, 1909.