Original Communications.

SOME SPECIAL FORMS OF ULCER OF THE CORNEA.

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IT is somewhat remarkable that a structure nourished as is the cornea, indirectly by osmosis or imbibition, and not by direct vascularization like most other tissues, and exposed by its position to the irritation of foreign bodies, should not suffer more frequently from ulcerative processes.* This comparative immunity may be due, on the one hand, to the activity of those musculo-fibro-mucous shields or eyelids, rapidly opening and closing, compressing the anterior portion of the eye, driving the nutrient fluids through the lymph spaces of the cornea, while the eye is bathed in a strongly saline secretion, the tears, the salinity of which favors osmosis and nutrition, the fluid at the same time washing away foreign bodies. As an adjunct, the filtering and protective power of the eyelashes is not to be underestimated. Let anyone, after driving along a dusty road, examine his eyelashes, when he will realize of what service they are as filters and screens. Lastly, the general tone of the system plays an important part in maintaining the health of the cornea. Ulcers of the cornea are not met with in persons of robust health, but in those who, from one cause or another, are "run down." Therefore, as underlying causes, we have to deal with two factors. (1) impaired local nutrition: (2) depressed general health. To these may be added a third, infection. It is not my purpose, in the limited time at my disposal, to speak of all forms of ulceration of the cornea, but of certain special forms.

Let me first draw your attention to the *round ulcer*. Indolent, almost stationary, lasting many months; perfectly round, clear or slightly turbid at the bottom, mostly non-vascular, lasting many months; unattended by photophobia, but causing annoyance and irritation at times, ending in perforation or cicatrization, with permanent scarring; sometimes secondary to granular ophthalmia, sometimes primary: such is the clinical history of these cases.

Somewhat analogous is the *funnel-shaped ulcer*. It differs in its greater activity and tendency to perforate. It is obstinate and persistent, and resists treatment.

The *crescentic ulcer* appears near the edge of the cornea. It is very painful, but does not cover much ground. It is attended by much congestion, photophobia and lachrymation, and tends to perforation.

The *ring ulcer* also begins at the margin of the cornea, but closer to the edge, and, if unchecked, pursues a steady course all round its circumference until the entire cornea is cut off from its supply of nutriment, and becomes opaque and sloughs off. The pain is comparatively slight. It always appears in old and feeble subjects.

The *rodent ulcer* of Mooren develops at or near the margin of the cornea, attended by marked inflammatory reaction. All about the ulcer is a grey margin which is undermined, presenting a crater-like appearance. In due course the ulcer begins to heal and to vascularize. One has just had time to congratulate oneself upon the successful result, when the symptoms recur, the ulcer reopens, but further on the cornea. Thus it goes on ulcerating and cicatrizing until the ulcer has covered the entire cornea. It does not attack the deep layers, so perforation does not take place; but, inasmuch as the superficial layers are in part destroyed, a permanent opacity remains. This disease attacks old people only, and not infrequently both corneæ at the same time.

* All diseases of the cornea constitute 21 per cent. of ocular diseases.—COHN, *Statistik der Augen Krairkhieten.*