

Fox (L. W.)

Ulcers of the Cornea

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# Ulcers of the Cornea.

BY

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Philadelphia, Pa.

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CLINICAL LECTURE DELIVERED AT THE MEDICO-CHIRURGICAL  
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*presented by the author*

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# ULCERS OF THE CORNEA.\*

BY L. WEBSTER FOX, M. D.,

Professor of Ophthalmology in the Medico-Chirurgical College,  
Philadelphia, Pa.

*Gentlemen,*—The several patients which I bring to your notice to-day are cases you will frequently see in the every day work of your general practice.

Ulcers of the cornea are the sequelæ of disease, a fulmination of a dyscrasia. Whenever you find an ulcer of the cornea be sure to look to the cause elsewhere in the economy, and not only to the eye.

Case I. Ulcers of the cornea due to inanition.

This child represents a class which, unfortunately, we find too often in large cities; want of food, neglect of hygienic surroundings, lack of warm clothing having brought this child almost to starvation. Note the result, then, emaciated and undersized. I cannot find anything in the history of the case which would lead us to think that we are dealing with an inherited disease or a traumatic cause. No, it is a case of lack of food. This child will be taken into the hospital, thoroughly bathed, put to bed and placed on a milk diet, with instruction to add a teaspoonful of cod liver oil three times daily, not forgetting a liberal allowance of beef tea, and such foods, which will build up the general system rapidly.

Locally, use the ung. ox. flav., of which a small piece, about the size of a canary seed, should be applied directly to the cornea once daily.

The formula for this ointment is as follows:

Hydrarg. oxid. flav. . . gr. 1-8  
Ung. petrolei . . . ʒ i

In many formulas you will find one grain of the hydrarg. ox. flav. to the drachm prescribed; in my experience this is too strong. It acts as an irritant and thus we provoke what we wish to allay, irritation.

In addition to the salve, the following formula is one of the best lotions:

Acidi borici  
Sodii chlor. . aa . . gr. xx  
Aq. menth. pip. . . . ʒ ii  
Aq. camph.  
Aq. distil. . . aa . . ʒ ii  
M. d. s.

Drop a dozen to twenty drops of this lotion into the eye twice or three times daily.

This ulcer, as you notice, is almost in the center of the cornea, deep, with sharply defined edges, very characteristic and always found in bad nutrition, and if allowed to go on, always ends in perforation.

Case II. Represents the type found in scrofulous patients, the ulcer slightly to one side of the cornea, ragged edges with a tendency to haziness of the surrounding tissues, and a turbid base, taking a long time to heal, spreading in area, always associated with conjunctivitis, profuse lachrymation and at times photophobia, face pale, glands of the neck enlarged, and digestion bad, with a marked tendency to constipation.

The general treatment in those cases

\*Clinical Lecture delivered at the Medico-Chirurgical College, Nov. 30, 1894.

is much benefited by cod liver oil and minute doses of calomel\*; locally, the same eye salve with a mydriatic, and by preference I add daturine, gr. 1-4. In cases where the irritation provokes contraction of the pupil, a mydriatic is preferable to a myotic, especially if photophobia and lachrymation exist.

The local treatment is instituted to prevent spreading of the ulcer, which might seriously injure the vision by the subsequent nebula or leucoma. The treatment in these cases must be directed towards an improvement of the general system. There is one thing to which I must call your attention, and that is the bandaging of the afflicted eye; see that a pad is placed over the closed eye-lid, securely held in place by a knit bandage. The constant moving of the somewhat irritated lid, and the constant exposure to extraneous matter keep up an irritation. When these ulcers prove very intractable, the touching of them with the solid stick, nitrate of silver, and immediately washing off the excess with a salt solution stimulates the ulcer to a healthy reaction, and improvement follows.

Case III. Phlyctenulae beginning with pustules.

This class of ulcers is found generally in children of a different dyscrasia. In such cases you always find more or less of a nervous temperament. I mean by this, excitable, given to chorea, slight spasms, poor sleepers, highly irritable, bad digestion, much trouble in cutting teeth, herpes of the lips, eczematous applications, skin delicate, and prone to excessive perspiration, and almost without affecting blondes or those with very little pigmentation in the skin, more than

brunettes. In this form of disease such remedies as one would prescribe for the two classes thus described, would be of little or no avail. You must now go to the field of dermatology for a remedy. Locally the ung. ox. flav. with a myotic, such as eserine, gr. 1-8, or pilocarpine, gr. 1 to the drachm, is valuable, but the drug which will be most efficient is *Fowler's* solution, (liq. potassii arsenit.) three to six drops three times daily, always looking to good food, careful bathing and proper hygienic surroundings as aids.

Case IV. Ulcer due to inherited syphilis.

This young boy has inherited a disease which is probably responsible for more ocular troubles than any other affection to which the human flesh is heir to, syphilis.

Note the shape of his forehead, the dished nose, lines about the mouth, notched and pegged teeth named after that distinguished English surgeon, who first associated teeth of this form with congenital syphilis, *Jonathan Hutchinson*.

This form of ulcer varies from the other, inasmuch as its degeneration and breaking down of tissue begins in the cornea propria, or the inner layer of the cornea, and breaks inward towards the anterior chamber, or pushing its way towards the outside and sometimes infiltrating the whole of the corneal tissue, breaking down as you notice, in this case. A general inflammation of the cornea is the most common in these cases—interstitial keratitis. It is only when you get the salmon colored cornea like this case that you need apprehend the gravest results.

The treatment for this individual case will not prevent, I am sorry to say, the loss of this eye, but will mitigate a possible breaking down in the fellow eye.

\*A preparation has recently been placed upon the market, containing cod liver oil drachm 1, chloride of arsenic gr. 1-200, bi-chloride of mercury gr. 1-120, proto-chloride iron gr. 1-4, with port wine and vegetable flavoring, which gives most excellent results in such cases.

## ULCERS OF THE CORNEA.

The local application first will be:

Ung. ox. flav.	gr.	1-4
Eserini	gr.	1-2
Ol. Morrhuæ	gtt.	xxx
Ung. petrolei	ʒ	1
M. ft. ung.		

Supporting the cornea with properly applied eye pads, and rubbing into the tender parts of the skin, in the bends of the knees, to-night, two drachms of the official ung. hydrarg., to be followed daily with the same quantity in the groins, arm-pits and the bends of the elbows, successively again, commencing at the knees and so continuing until the odor of the breath tells us that the hydrargyrum is being eliminated; internally, small doses of potass. iodide combined with the bromide, about three to five grains of each three times daily.

The patient should be kept in bed.

*Darrier*, of Paris, claims excellent results from direct injections in the sub-conjunctival tissue from the bichloride of mercury. My experience has led me to continue in the line laid down by *Hutchinson*.

The syrup of hydriodic acid is also an excellent remedy, and may be prescribed in cases where the symptoms are not as pronounced as in this case.

There are ulcers of the cornea of a mild type which do not come under any of the divisions to which I have called your attention to-day. They are very superficial, or may involve the conjunctiva at the margin of the cornea. Then again, we have a peculiarly obstinate form of ulcer called the serpiginous ulcer. It has a curved or waving margin, a grayish base, showing a tendency to extend itself over the surface of the cornea, and hypopyon is almost always present as one of the complications. Almost sure to follow is perforation.

The popular name for this form is *Saemisch's* ulcers.

It is the only form of ulcer in which an operation is required, a small *Graefe* knife is passed through the cornea just beyond the growing edge, making an incision through the corneal tissue to empty the anterior chamber of accumulated pus. I have noted most excellent results from this operation.

It is of the greatest importance that all liquids containing a mydriatic should be sterilized before applying them.

In our clinic here, we always use the *Llewellyn* flask for this purpose. In any form of ulcer going on to the formation of pus the actual cautery is probably one of the best means of aborting perforation.

This instrument which I show you, was made in Paris and is probably the best in use. It was made after the form devised by *Prof. Sattler*; it is an electro-cautery. The first model was practically a *Paquelin* thermo-cautery, a solid ball of metal, from which projected a needle point on one side, and on the other a handle. The ball was heated to a white heat over the flame, thus retaining the heat, and keeping the needle not for a longer period of time than could be obtained by simply heating a needle. This method has been superseded by this new model, the electro-cautery, heated by the electric current.

As general practitioners you should not resort to this method until the ordinary methods have been employed.

The alert physician will also investigate the naso-pharyngeal passages and if any trouble is discovered, correct them.

The general tone of the system must be brought up to the normal, and with the local applications your success in the treatment of ulcers of the cornea may be assured.



