noxious influence of the CO_2 causing rapidly the death of the whole cornea. In other words, I am of the opinion that carbon dioxide is able to permeate through the cornea from the surrounding atmosphere towards the anterior chamber, the possibility of which Fischer denies.

Summary

In this paper I have given a description of some experiments which had the object of studying the influence of various concentrations of CO_2 and the absence of oxygen in the surrounding atmosphere on the cornea of anaesthetised albino rats. With the help of artificial breathing it was possible to close up the animals in a tank filled up with one kind of gas or another, and in this way to expose the eyes of the experimental animals under otherwise normal conditions to the gas under investigation. It could be determined that the so-called selective permeation of carbon dioxide through the cornea is not probable. Absence of oxygen in the surrounding atmosphere does not inhibit normal life of the cornea. The corneae remained transparent for many hours in an atmosphere of 8 per cent. of carbon dioxide and 92 per cent. of nitrogen. Special attention was paid to possible pathological changes in the corneae after the experiments were finished.

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CONTRIBUTIONS TO TOTAL BLEPHAROPLASTY*†

BY

IDA CZUKRÁSZ

DEBRECEN, HUNGARY

THE substitutions of deficiency of the whole lid is one of the great problems in plastic ophthalmic surgery and more so, if the upper lid is absent. There have been several methods published, recommended and employed. Here I want to show three different methods of restoration—better to say substitute—for upper lid loss, providing suitable outer and inner layer at the same time.

CASE 1 (Fig. 1). The left upper lid of a lady aged 60 years was

* Received for publication, November 15, 1946.

† Report from the University Eye Clinic, Debrecen. Leader: Professor Kettesy.

infiltrated with carcinomatous tissue. The tumour was the size of a green almond with ulcerated surface and of very interesting origin. Several months before the plastic operation was done she had been twice operated on for multiple chalazia. The tumour developed possibly out of chronic inflammation of the Meibomian glands. This was shown by microscopic sections. The pathologist's diagnosis was carcinoma alveolare.

After the extirpation of the tumour the whole upper lid was lost, only a one and half cm. broad skin strip was left beneath the

FIG. 1.

FIG. 2.

eyebrow. The bulbar conjunctiva was intact with 3 mm. of upper fornix. Here we decided to employ Hughes's method, but reversed. He rebuilds the lower lid out of the posterior layer of the upper lid, and of the skin and even of the peri-orbital parts of the face. The procedure is based on Landolt's and Kuhnt's ideas, who actually establish a total blepharorrhaphy between the lid-stump and the split normal lid. The two layers are separately united and in a different level. (Figs. 2, 2a, 2b).

Fig. 3 shows the state after the blepharorrhaphy.

Nine months later a new palpebral fissure was opened at the desired height (Fig. 4). We hope to get in another few months a fairly good function also.

CASE 2. An old lady aged 71 years lost the left upper lid, a basal-celled carcinoma infiltrated one third of the width and the entire length of the lid. The surface was badly ulcerated.

In this case we chose Blaskovic's II method. The tumourous eyelid was excised through healthy tissue. After that we mobilised the remaining conjunctiva of the eyeball and putting 3-4

FIG. 2a.

FIG. 2b.

simple sutures in its border, sew it to the skin of the lower lid, at the level of the orbital margin (Fig. 5). Then, with a bridge-flap of 1.0–1.5 cm. breadth, outlined parallel with the eyebrow, the

FIG. 3.

FIG. 4.

anterior layer of the future lid margin was performed (Fig. 6). The secondary large defect was covered with a Kettesy graft. Figs. 7 and 8 show the result after the operation.

CASE 3 is of particular interest. I have shown it already at the Oxford Ophthalmic Congress in the year 1938, then speaking generally of the arched plasty. It occurs very seldom, one has to restore both lids, and to be able at the same time to save the eye

FIG. 5.

FIG. 6.

too. That happened in our case, a woman aged 57 years (Fig. 9) had an enormous carcinoma partly cicatrised in consequence of other treatment applied elsewhere, partly progressive of the baso-cellular type. The eyeball was intact with sight :1, so we decided to save the bulb. We removed of the total upper and lower lid, inner and outer canthus and a piece of the forehead skin. Then we had the problem how to substitute both eyelids with both

FIG. 7.

FIG. 8.

layers. Fortunately some bulbar conjunctiva was left, and we thought the posterior layer could be done by that. We covered the huge defect with a single sliding flap after Blaskovics, known also as Hungarian plastic (Fig. 10). This extended from the inner canthus to the auricular lobe. The flap was perfectly living, but we were not sure whether the conjunctival sac would develop that we wanted so badly. Eight months later our patient returned, and then one could feel the moving eyeball, and above this a cystoid growth which had developed underneath the flap. Naturally this was a good sign because the walnut sized tumour was a cyst in that

the conjunctival remnants met above the cornea. So we could hope to find, by preparing with a horizontal cut an eyelid fissure, the cornea unaltered. Moreover we were intending to form the eyelids having there already some conjunctival tissue.

FIG. 9.

FIG. 10.

FIG. 11.

When the eyelid fissure was actually done we found the eyeball intact, sight unaltered. Later on from the viewpoint of cosmetics we made an attempt at tattooing an eyebrow (Fig. 11). We intended also to make some kind of ptosis operation, but we lost our patient by the war.

Summary

These cases above represent three different methods of substituting the total lack of eyelids. Applying these methods we never failed. The first procedure is Hughes's method, that is equally fit to restore the upper and lower lid. Blaskovic's II operation is suitable when the whole upper lid is missing. The Hungarian plastic generally is used only for substituting the lower lid but in cases when both lids are lacking we recommend the sliding flap, moreover if we hope to save the bulb, being able to replace at once the upper and lower lid with one arched plasty.

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ANNOTATIONS

On Forewords

It is becoming increasingly common nowadays to find new medical textbooks issued from the press with a foreword which, in most instances, has been contributed by some physician or surgeon of outstanding personality. It is one of the penalties attaching to the exalted position they have reached in their profession.

Johnson's Dictionary makes no mention of the word, but the Shorter Oxford Dictionary dates it from the year 1842 and defines it as "a word said before something else, hence a preface." But it is not the recognised preface in professional books, for this is always written by the author. The word is not a particularly pleasing one, and we might say, as Mrs. Blimber said of the name of Mr. Glubb, the old man who drew the bath chair in which little Paul Dombey was dragged on the sands of Brighton, that it is unclassical to a degree. If a really classical substitute is desired we can think of no better word than prolegomenon. Prelude, proem and introduction are quite unsuitable and we do not much care for preamble or prologue in this connexion.

Altogether we fear that the foreword must stand, for we do not see what better word could be chosen. When we began this note we toyed with the phrase "Grace before Meat": but have decided that it is hardly suitable and the shade of Charles Lamb might be offended; and the proposition might be maintained that in this case the grace should be placed after the meat and not before it. We refrain from drawing a parallel between the foreword and placenta praevia or between an epilogue and the after birth.