

to me incredible that this preparation of tuberculin was a reliable preparation because of the fact that no reaction whatever was obtained, either general or local, in this case. I may say in regard to another feature of this case, that improvement seemed to follow the introduction of the tuberculin. If I read the report right, after this diagnostic dose was given the eye seemed to improve somewhat. Is that not so?

Dr. OSCAR DODD, Chicago: I was giving other treatment and the patient had considerable improvement before.

Dr. JOHN E. WEEKS, New York: It seemed to me that the patient, even though no general reaction occurred, showed little improvement after the tuberculin was used and had a relapse of his tuberculous process and became worse afterward. In the treatment of tuberculosis I have had two or three relapses because the tuberculin was discontinued too early, but a resumption of its use brought about recovery. In quite a number of cases—I think about eighteen—the results have been quite satisfactory by the subcutaneous use of tuberculin, using only T. R. for therapeutic purposes. But the ordinary T. O. also possesses marked therapeutic value, as has been demonstrated in a few cases in which I have used it purely.

Dr. J. A. DOXOVAN, Butte: Dr. Weeks introduced an innovation about the reaction of tuberculin that I thought about in connection with this case. I had a series of cases—in fact, they are under treatment now—of six patients whom I had been treating with one of the local tuberculins. In two of these cases in which I was not getting as much results as I expected I switched to a German preparation. One woman and one man in whom I got practically no reaction at all before, were put in bed sick, with an elevation of temperature. A laboratory man said that tuberculin was not standardized at all and that I should not have done it. I treated one patient in St. Paul some years ago with tuberculin with apparently beneficial results, but in two or three instances I had to go back to guaiacol. I got the suggestion of guaiacol (2 per cent. in glycerin) from Dr. Darius, and in every case I have had that gives immediate reaction, and it is very much more positive, so far as improvement is concerned, than tuberculin.

Dr. OSCAR DODD, Chicago: The appearance of the exudate, as mentioned by Dr. Weeks, to me was suggestive of tuberculosis; so much so that I could hardly believe the fact of not getting a reaction. As to the reliability of the tuberculin, it was the preparation used in the hospital which they had obtained results with. I should have made tests with other patients in order to control it. As to the improvement after the use of the tuberculin, the tuberculin test was not given until after the eye was really rather quiet. Under atropin and dionin the eye would quiet down and remain so until I stopped the atropin again. The tuberculin test was not given until the latter part of June, on account of the fact that the patient would not consent to go into a hospital until that time, and the eye made no particular change, so far as I could see, following that. About August 13 the patient went away on a vacation and did not return again until October 20. The eye remained quiet until about two weeks before he returned, when the rapid changes in the lens and eye necessitated removal. Another point which I do not speak of in the paper was the fact of the irritation of the other eye. It was very much irritated, and after the pathologic examination the specimen was carried by Dr. Lane to Professor Salzmann, who said at once that the patient must have had irritation of the other eye, a fact that was true throughout the case. He was unable to use his other eye to any extent.

Barbers and Surgery.—The barber of the present day is not expected to do surgical work, although his sign still gives notice that accidents may happen. The bloody pole with its white bandage reminds us of the day when the barber was the surgeon. The family of Poisson decided for him in his youthful days that the work of a notary required greater intelligence than he possessed, and advised him to become a surgeon. It was not until 1745 that the "barberous" work of the surgeon and the surgical work of the barber were, in England, eliminated by law, says F. E. Nipher in *Science*.

PLASTIC SURGERY OF THE EYELIDS, USING THE WOLFFE GRAFT*

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Plastic surgery has always impressed me as being the height of all surgical skill. For obvious reasons plastic surgery about the face, about the eyelids particularly, not only requires good judgment on the part of the operator, but his technic is put to the severest test.

The operation for the restoration of the lids and of the cul-de-sacs in contracted orbits, in the complete ectropions, especially from burns, and many other conditions, makes the deep cutaneous graft of Wolffe the ideal one to be used in such cases. My experience in twenty-five cases in which this cutaneous graft was applied has been so satisfactory and the method employed is so simple that I present the subject with the hope that it will be of interest. No claim is made to originality in the operation to be described, for my ideas were obtained from observing other operators.

There are two important steps to be remembered: First, the surface to be grafted must be denuded and must have sufficient blood-supply to nourish a healthy graft; second, a graft must be obtained of sufficient size to more than cover the area.

The ideal case is a complete ectropion of the upper or lower lid, and the one I now report, in which the result was most brilliant, was that of a farmer who, eighteen years before the first operation, had fallen into an open fire, burning the left side of his face and forehead. In time there was a complete distortion of that side of the face from the cicatricial contraction, and the ciliary margin of his upper eyelid occupied the position of his eyebrow, which had been destroyed, and the margin of the lower eyelid was pulled well down on the cheek. The conjunctival surfaces of the lids were completely everted and exposed, and from prolonged exposure they had become much thickened, resembling a velvety type of trachoma. The picture he presented was horrible. Fortunately the man had excellent vision, the globe in no way being injured. Two operations, at six months' interval, were required, the upper eyelid being first operated on.

After cleansing the face with ivory soap and water, then irrigating with a normal saline solution, I made a superficial incision above the ciliary margin, then little by little I undermined the whole lid, as one would in an ordinary integument dissection, preserving the muscular structure. This flap of the lid, when folded down over the globe, nearly covers the entire exposed conjunctival surface of the lower lid. Bleeding is of no consequence, but should this be troublesome a small artery clamp applied for a few moments would control the annoying vessel. After this part of the operation is completed, and the operator is sure that the eyelid will remain in place from its own weight, a pad saturated with hot saline solution is applied and gentle pressure made by an assistant, while the graft is obtained from the inner surface of the arm, forearm or thigh. I have never obtained a graft except from the inner arm, and in one case I removed, at intervals, five grafts from the two arms. The left arm is generally prepared, after the usual manner of shaving, cleansing with green soap, bichlorid of mercury and a saline dressing applied some hours before the operation, so that the graft will be as little irritated as possible at

* Read in the Section on Ophthalmology of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

the time of the operation. A nurse or an attendant holds the arm out from the body by the hand, and the arm is wrapped with sterile towels.

Some idea should be had as to the size of the place to be covered, and I usually measure it roughly with the handle of my scalpel, then make the graft at least one-third larger, allowing for shrinkage and a loose fit. An oval graft is advisable, as the wound of the arm which is to be subsequently closed leaves only a linear scar. I usually mark off on the skin of the arm with the knife four small lines indicating the size of the graft, then connect them with a superficial incision, and as the graft is removed the incision is deepened, extending down to the fatty layer. A pair of tissue forceps and a Des-

restricted blood-supply from too tight a bandage or tension of the wound.

The new graft should be applied immediately to the raw surface for its nourishment, but all bleeding of the wound must first be controlled, lest a blood-clot subsequently forming beneath the graft delay healing or form a good nidus for infection. I use a strabismus hook to smooth the graft into place, and it is remarkable how an irregular surface can be beautifully and evenly covered. Small sutures of No. 5 black silk are used to hold the graft in place. They are first placed at four equidistant points, to even the graft, then the space between is filled in with as few as possible to hold the graft steady. If the graft is too large, it can be trimmed after

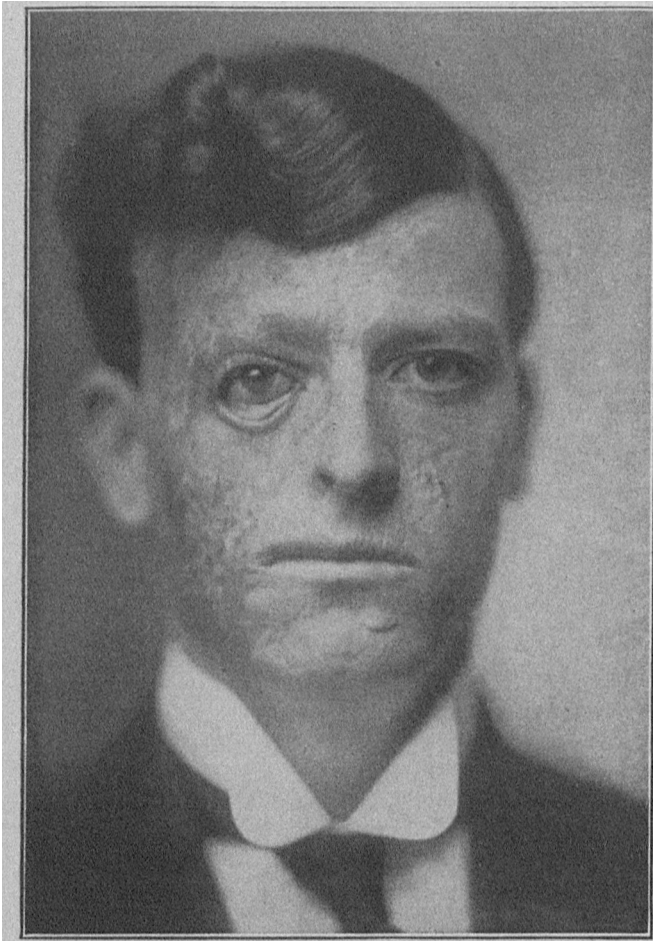


Fig. 1.—Ectropion of upper and lower lids of twenty years' duration, from burn of face.

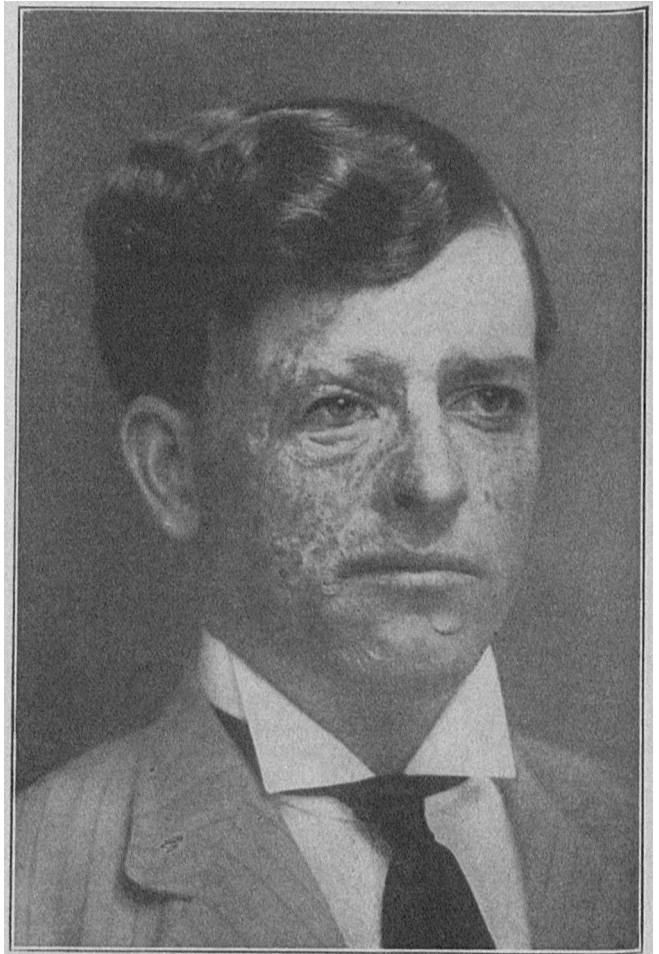


Fig. 2.—Lower lid repaired with a Wolfe graft. Picture taken one year afterward.

marres lid scarifier are the only instruments necessary in this step of the operation.

The graft should not contain any of the areolar or fatty tissue, and after its removal, with a pair of scissors curved on the flat, the raw surface should be trimmed of all the loose and unnecessary tissue; it is then placed in a towel wet with warm saline solution and is ready to be applied to the raw surface previously made.

The arm wound can be repaired by an assistant, or later by the operator. This operation simply consists in undermining the edges sufficiently to bring them together without tension. Two or three silkworm gut retention sutures are best used, followed by a continuous silk suture of coaptation; a dry dressing is applied and the wound is not disturbed until the fourth day. The nurse should watch for swelling of the hand for several hours after the operation; if present, this would indicate a

it is in place; but it is better to have a too large, loose fitting graft than a too small, tight one. The subsequent contraction may spoil a beautiful operation.

A dry dressing is applied, made up of several layers of gauze to absorb the secretion, then loose gauze on top. The first dressing should not be made sooner than the fourth day, then the adherent pieces of layer gauze should be moistened in order not to pull apart the wound. The sutures can be removed, or at least a part of them, for I have found that delayed removal may cause a slight infection, which may destroy the graft. Sterile petrolatum should be gently smeared on the wound, and a tight dry gauze dressing applied. At intervals of two or three days the dressings should be changed until the superficial epithelium of the graft commences to slough, then the wound should be cleansed daily. The slough may be frequently trimmed. In about three weeks the

patient can go without a bandage or other protection, but for many months later it is well to have the patient massage the new lid daily with petrolatum, so that it may be kept soft.

In my second case of ectropion of the lower lid there was a slight recurrence two months afterward, but daily massage entirely corrected the condition. The method of restoration of the cul-de-sac by using the Wolffe graft is described in the excellent monograph of Weeks.¹ While the major points of that operation are similar to the method just described, some niceties in technic and the application of sutures and the use of the dental rubber plate for the holding of the graft are more thoroughly explained.

While the operation that I have just described applies best to flat surfaces to be grafted, chiefly ectropions, I have recently used it with success in two nose cases in which the alae had been destroyed by burns, and in a case of burn in which the upper lip had been pulled high up on the cheek from the scar contraction. The vermilion border was undermined, the scar in part being dissected out and a very loose graft applied. The appearance was much improved.

So far I have not had an infection or a complete failure. The nearest approach to failure occurred in a severe case of ectropion of the lower lid referred to me by Dr. W. P. Nicolson. The patient had had a mole removed from his cheek years ago by the application of some caustic paste, which had caused so much tissue necrosis that most of the soft tissue of the cheek on one side had been destroyed, exposing parts of the upper and lower jaws. Dr. Nicolson restored the cheek by a pedunculated graft removed from the neck, and referred the patient to me to correct the lid deformity. There was little sound surface for the graft, except the deflected ectropic lid, and the slough that followed only delayed epidermization.

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ABSTRACT OF DISCUSSION

DR. JOHN E. WEEKS, New York: The operation for restoring the lid in ectropion presents a number of important features which may be mentioned, and one is the preparation of the area to be covered. In burns of the skin either above or below, if the burn is extensive the margin of the lid is drawn well up to the brow, and in some cases the ectropion is complete. In these cases the margin of the lid, or what remains of it, the conjunctiva and the tarsus, with a portion, perhaps of the orbicularis muscle, should be dissected from the underlying tissue, and it is well to attach the margin of the lid to the cheek by means of sutures so that the margin of the upper lid, if we are operating on that lid, overlaps the lower lid in its normal position from $\frac{1}{4}$ to $\frac{1}{2}$ inch, in order, to give as extensive an area as possible on which to apply the flap, because we must provide for subsequent shrinking. The flap, as Dr. Calhoun has said, should be made somewhat larger than the area to be covered as it is marked out on the surface from which the skin is to be removed, as the arm, so that if we make an allowance of one-third of the diameter of the denuded area it will shrink so that it will just about cover the area. The largest flaps I have transplanted have been $2\frac{1}{2}$ by $2\frac{3}{4}$ or $2\frac{1}{2}$ by 3 inches in diameter. The flap is removed, taking with it as little subcutaneous tissue as possible, and this tissue, if it has been raised with the flap, should be removed as well as possible before the flap is put in position. The question of the retention of the flap in position then comes up. It was my practice years ago simply to undermine the edges of the denuded area to some extent and to crowd the edges of the flap into this little groove thus formed and to permit it to lie in position without the appli-

cation of sutures; but later I employed fine sutures to attach the flap to the margin of the denuded area, and also one or two sutures passed through the center of the flap to hold the flap to the underlying tissues. This is not often necessary. It occurred in one or two cases that the margin of the flap became displaced somewhat unless it was held in place by sutures. In regard to the dressing, it has been my custom to cover the flap either with gold-beater's skin or with rubber tissue, the surface of which has been smeared with sterile petrolatum, or petrolatum to which some bichlorid has been added in the strength of 1 to 5,000, then to apply a dry dressing and permit the eye to remain bandaged three to five days before disturbing it, according to the symptoms. The place from which the flap should be obtained is the inner surface of the arm, provided this is available. In some cases it is not available and I have removed the flap from the inner surface of the thigh. In one case I had a failure with a flap from the thigh. This was in a patient who was burned, and her condition was not very good, and because of some peculiarity which I did not and do not understand I had sloughing of the flap. The flap can be removed deliberately. There is no necessity for hasty removal although the removal of the flap and placing it in position should be as expeditious as is consistent with good technic. Perforation of the flap is not harmful.

DR. F. B. TIFFANY, Kansas City, Mo.: I wish to emphasize the importance, as Dr. Weeks has said, of freeing the flap from the connective tissue below. This will prevent its shrinking. There will not be nearly as much shrinking if this is done.

DR. WILLIAM ZENTMAYER, Philadelphia: My experience with the Wolffe graft has not been very satisfactory on account of the amount of contraction that occurs with the lapse of time. A year ago I operated for a cicatricial contraction of the lower lid, and when I exhibited the patient at the Clinical Society at Wills Hospital the result was as nearly perfect as it could be. That flap from that day on has dwindled and dwindled until to-day the result is very little better than it was originally. I remember very well Dr. Hart telling us of a case shown at the American Ophthalmological Society. He took the patient to New London and exhibited him, and then took the patient to the meeting a year later to show that the flap had disappeared. There was not a trace of it remaining. I am sorry to say my experience has been the same with small flaps. There may be some fault in the technic; there may be some subcutaneous tissue left, but I try to do it just as Dr. Weeks explains it.

DR. W. E. LAMBERT, New York: I have had the opportunity of doing a number of these cases. Dr. Zentmayer has emphasized the importance of removing the subcutaneous areolar tissue, which takes away the tendency to shrink. A large flap is important. I would emphasize the importance of using the sutures. I had a similar case in which this operation was made for the cure of an ectropion, and the picture of the case here reminds me of that. Proceeding as Dr. Calhoun has described, the result was satisfactory. Dr. Calhoun did several of these operations while an intern with us, and I can testify to his expertness. We are glad to turn these cases over to the house surgeon. A case similar to the one described I did some time ago and the result is yet most satisfactory.

DR. F. PHINIZY CALHOUN, Atlanta, Ga.: The longest time I have had a case under observation is six years, and every year it seems the patient improves. There is no contraction such as Dr. Zentmayer describes in his case. I do not know why that takes place except that the areolar tissue is left and makes the contraction more marked. This paper deals with twenty-five cases, and since writing it I have had three others. In the first of the series of three by accident the graft fitted the denuded surface exactly. I noticed that the healing was quicker than when a large graft would be crowded into an area, but I do not know that this is advisable, because the contraction in instances in which the flap fits exactly would be more marked than when the flap would more than cover. The cases in which operation has been done were mostly cases in which there were severe burns of the face of long standing. The second patient of this series of three was a

1. Tenth Congress of Ophthalmology, Lucerne, 1904.

man who was burned about six months ago. Three months after the burn I operated, and that really is the only case in which I have had a failure, the only case in which there has been marked contraction of the flap following the operation. I attribute that to the fact that I did not wait long enough. If I had waited six months longer, or a year, or two or three, the result would have been better. I usually take the flap from the inside of the left arm in right-handed people. But I have operated on a girl five times. I have restored the upper and lower lids, the area about the nostrils, and have operated also for contraction of the upper lip. I have taken two grafts from each arm and one from the inner surface of the thigh. I only operate on one lid at a time, because in these cases it is necessary to undermine the lid to pull it down and it more than covers the eyeball, whereas if you operate on both lids at one time one lid would overlap the other, which would be objectionable. I always apply a dry dressing first to absorb as much of the moisture, tears and blood as possible. The application of petrolatum, I believe, would prevent this absorption. After the first dressing petrolatum is an ideal dressing.

A CASE OF ACUTE GASTRIC ULCER OF THE ANTERIOR WALL

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Ulcers of the posterior wall and greater curvature of the stomach and duodenum in the region of the pylorus

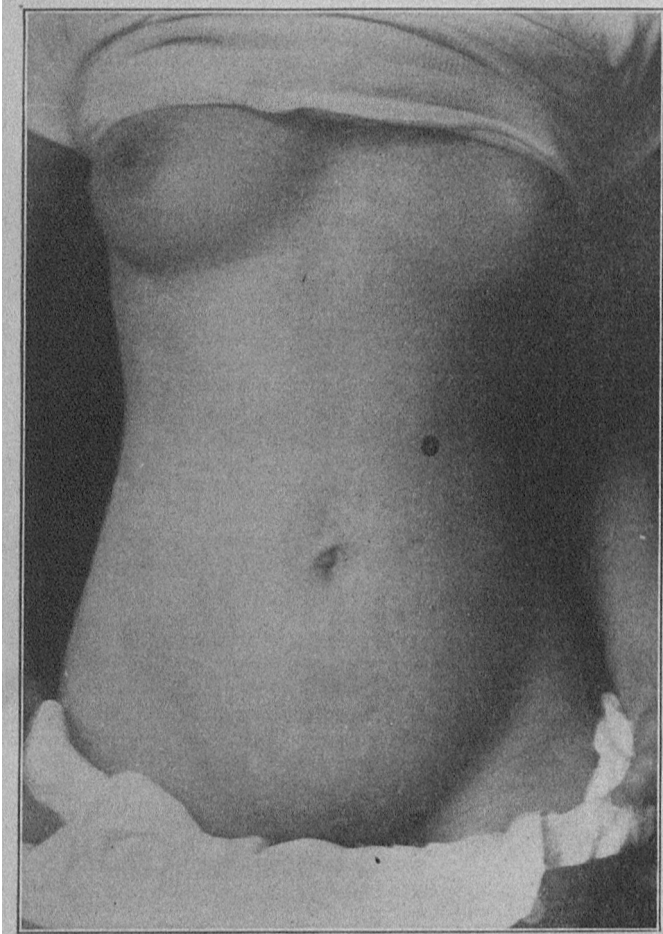


Fig. 1.—Showing the patient and the location of the subjective pain, the point of tenderness on pressure and the plastic exudate. There was no referred pain or tenderness in the back.

are most common, while those of the anterior wall all the way to the fundic region are distinctly uncommon—

comprising, possibly, not more than 10 per cent. of the areas with which gastric juice comes in contact in the process of gastric digestion. Ulcers in the latter location are but rarely diagnosed medically, diagnosis usually taking place at operation for their perforation—a complication most likely to happen in these cases because of the unprotected anatomy of the anterior area of the stomach. The rapid peritonitis consequent to



Fig. 2.—X-ray plate of the patient, showing the ulcer, the large and prolapsed stomach and the hypermotility. U, ulcer; D, first part of the duodenum; P, pylorus; DD, lower portion of the duodenum; and F, fundus with the stomach rugæ below it.

perforation of these ulcers, also makes the diagnosis of them important, and a case is offered in which this was possible and in which the medical treatment was successful.

Patient.—Miss E. McD., a stenographer, 18 years old, was first seen on Feb. 28, 1911. Her father died at the age of 45; cause unknown. The patient's mother was living and well. The patient had always been fond of sweets (mostly candy) and had indulged intemperately for several years, which at times had brought on an acute distress in the stomach with a day or so of anorexia; other than this the patient had had no illness except measles and scarlet fever in early childhood. In December, 1910, she began to have a constant distress in the stomach, in which the symptoms of excessive gas collection with eructations and pain an hour after meals in the left side of the abdomen were the prominent features. This pain, which was most acute, was relieved to a moderate degree by the taking of food, more so by bicarbonate of soda, and was entirely relieved when the patient lay flat on her back with her corsets off. She stated that by taking milk, eggs and other simple foods in small quantities at a time with the assistance of bicarbonate of soda, she was able to be about at her work. The solid foods she ate evenings and Sundays when she could lie down for three or four hours after taking them. According to her statement, she had lost only 4 pounds since the beginning of her illness.