

ROENTGEN RAY IN EPITHELIOMA.

REPORT OF A SERIES OF CASES TREATED MORE THAN
THREE YEARS AGO.*

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No one doubts that epitheliomata can be healed with the x -rays. The statement, however, is frequently made that the results are not as permanent as when the lesions are radically destroyed by other methods of treatment. This is an important matter to settle, and we are now nearing the time when the permanency of the result can be established. I desire, therefore, to report the results in my series of epitheliomata treated with x -rays more than three years previous to July, 1907.

The number of cases is too large to recite each case in detail, but the results can be summarized quickly. The details of fifteen of the cases also are indicated by the photographs presented herewith, most of them in pairs, showing the original lesion and the result after three or more years. Lack of space prevents the publication of the photographs of about thirty additional cases. I have confined my consideration to epitheliomata. I have not included in my list epitheliomata which at the time of beginning treatment were complicated by demonstrable carcinoma in the neighboring glands. I have thus excluded a few hopeless cases of epithelioma of the penis with metastatic complications, and numerous cases of carcinoma of the neck following epithelioma about the face and mouth. I have, however, excluded no case in which glandular metastases developed after treatment was begun; fortunately I had no such accident. I have also not excluded any cases where the spread of the disease has been by continuity. The list, therefore, includes many hopeless cases in which there had been wide involvement of the orbit, other cases with deep destruction of the tissues of the face from the spread of lesions originally involving the nose only, and other extensive and very destructive cases. I may also say that in accepting the cases no effort was made at selection; the most hopeless cases have been treated regardless of a record whenever there was the remotest possibility of giving the patients any sort of benefit.

The total number of epitheliomata in this list which I treated with x -rays more than three years ago is 119. Of these cases I have been unable to obtain the subsequent histories of only eight; of these eight, five, I think, should have been successes and three failures, but, throwing the entire number out of consideration, it leaves 111 patients treated more than three years ago whose histories up to July of this year are known.

Of these 111 patients 80 either remain well to-day, have died without recurrence of epithelioma, or remained well more than three years after a healthy scar was produced, but can not now be located. As a matter of fact, 66 of these 80 patients were living with healthy scars in April last. Six were living without recurrence at least three years after they finished treatment. Eight of them are dead; two died from pneumonia, and one patient each from acute leukemia, apoplexy, nephritis, heart disease, acute bowel trouble, and carcinoma of the uterus, the last mentioned having symptoms before the treatment of the lesion on her face was begun. This patient died about a year after the lesion on her face

healed, and she was the only one who died within a short time after the treatment of her epithelioma. Two other patients who are now dead lived from one and one-half to three and one-half years. Omitting these eight patients who died from other diseases, one patient has been well over six years, 11 patients are well over five years, 22 over four years, 32 over three years, and 6 were well more than three years after treatment, but whether they are now living I do not know.

The diagnosis in the cases is, I believe, beyond question. In all of my earlier cases the diagnosis was confirmed by microscopic examination. In the later cases microscopic examinations were made when there was any possible room for doubt. The unmistakable character of the lesions and the variety of the lesions treated are evident to the eye in almost all of the photographs shown. They varied from the most minute epitheliomata, about the size of a small pea, to lesions above the size of a hand. Many of the worst cases were primary as regards operation, but of the eighty successful cases forty-one were primary and thirty-nine were cases which had recurred after previous radical treatment, usually operation.

For the purpose of further analysis I have divided all of the cases into the following four groups: (1) Successful, 80 cases; (2) practically successful, 2 cases; (3) distinctly benefited, 17 cases; (4) failures, 12 cases; total, 111 cases.

PRACTICALLY SUCCESSFUL.

In the group of practically successful cases are included two cases. The first case was a large epithelioma of the shoulder.

This patient had had for twenty years a rodent ulcer, which at one time had reached an enormous extent, involving at least a square foot of the shoulder and back. Under persistent treatment, extending over years, in the hands of the most competent men, it had been reduced in size to about that of the palm of the hand, but it had never been healed. This was the first case that I treated with the x -rays, and the treatment was undertaken because the case was regarded as hopeless.

A symptomatic cure was obtained in May, 1901. Fifteen months after the disappearance of her epithelioma, this patient, a very old woman, received an injury from a fall from which she was compelled to go to bed, and in a few days died from pneumonia. At the time of her death there was no evidence of recurrence, except a point on her shoulder, which looked suspicious. I was able to obtain the skin from this shoulder, and it showed healthy scar tissue, except at this suspicious point, where I found an epitheliomatous mass the size of half a wheat grain. This could have been destroyed readily by x -rays or a caustic or other destructive agent.

The second case was epithelioma involving the entire concha and the outer half of the external auditory canal. A superficial ulceration, the size of a dime, has never disappeared in this case, and it is, I believe, an x -ray burn and not an epithelioma. It showed no tendency to grow when I last saw the patient a year ago. In this case the lesion had been converted into a trivial ulcer with no tendency to spread, and the improvement had persisted for over four years. This case also was an epithelioma recurrent after operation.

DISTINCTLY BENEFITED.

Seventeen cases are classed as having been distinctly benefited. The improvement in each of these cases consisted in checking the course of the disease for a year or more, except in the case of a man over 80, who died within the year, and in prolonging the patient's life, in comfort, for at least that length of time. Every one of the cases was an epithelioma which had re-

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cured after previous operation, and practically all were hopeless of other relief. Seven of these cases (Figs. 22 to 25) were epitheliomata which had begun at the inner canthus and had spread into the orbit and on to the nose. In four of these the disease had extended so far into the orbit that the eye had been destroyed; in two the bones of the ridge of the nose were deeply involved, and the orbit infiltrated to the point where operation was regarded by surgeons who referred the cases as im-

June, 1903; the disease was held in check sufficiently for his eye to remain useful up to December, 1906, over three years; since that time the eye had been destroyed.

Four of the seventeen cases were epitheliomata, the size of a large coin, involving the temple and the outer canthus of the eye and spreading into the orbital tissue. In each of these cases the external lesion was healed. In one case the disease recurred on the temple within a year. A radical operation was attempted by a surgeon

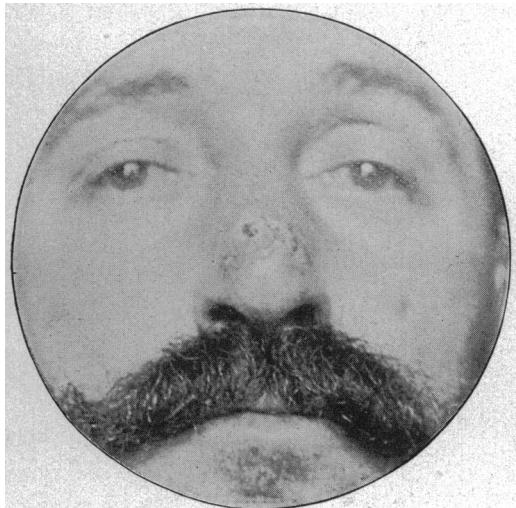


Fig. 1.—Epithelioma of tip of nose, May, 1901.



Fig. 3.—Photograph of patient shown in Figs. 1 and 2 with healthy scar, July, 1907

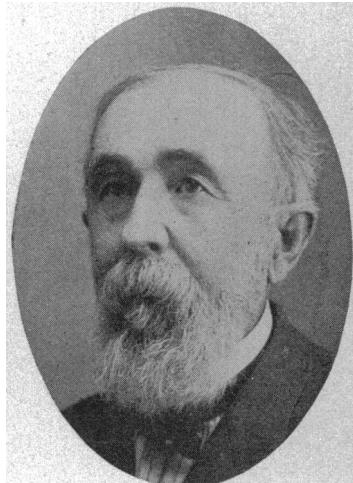


Fig. 5.—Photograph of patient shown in Fig. 4, May 27, 1907, showing condition after five and a half years.

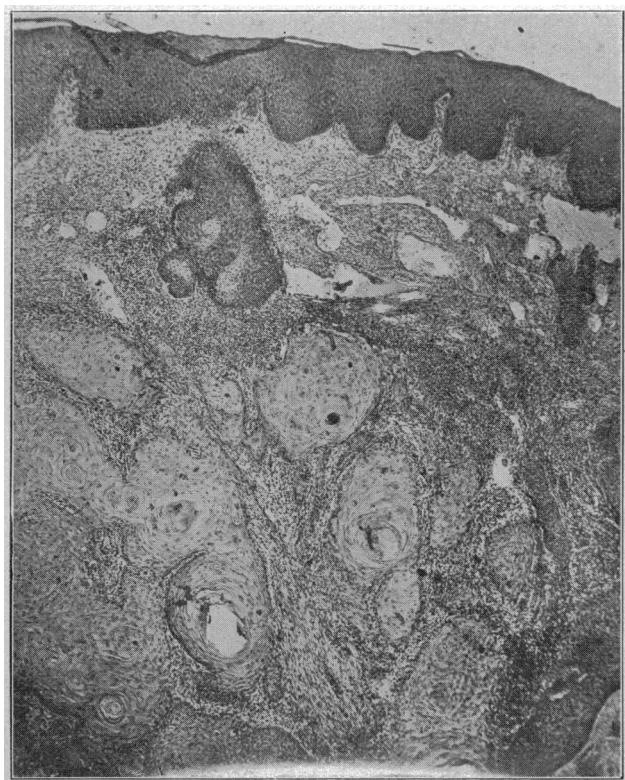


Fig. 2.—Microphotograph of tissue from patient shown in Fig. 1.

practical; in one the disease had involved the orbit and the adjacent bone to the point where the eye was fixed in the carcinomatous tissue. In this case the patient had only the one eye, the other having been lost in childhood, so that checking the course of the disease was of vital benefit. This patient came under treatment in

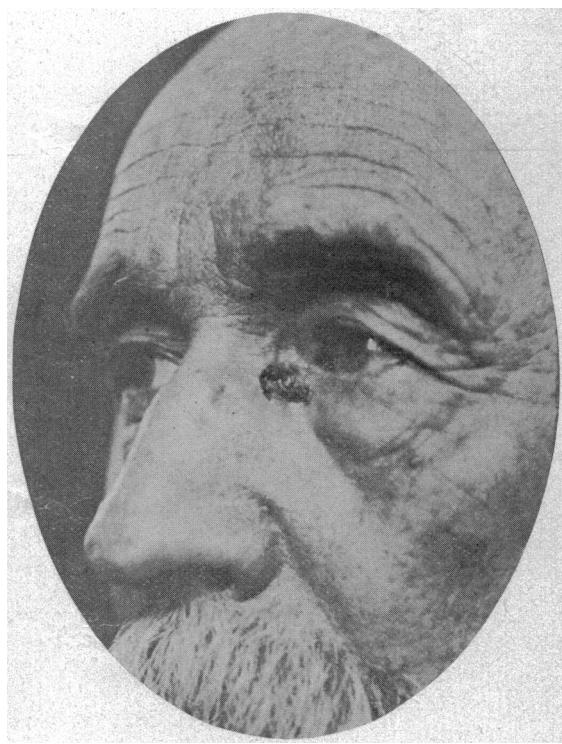


Fig. 4.—Epithelioma, March, 1902.

and the patient died in a few days from aspiration pneumonia. In the second case a large external epithelioma was made to disappear almost completely, and extension was checked for a year and a half, until the patient's death from chronic spinal disease. The two other patients are still living. One is a very feeble old man whose external lesion was healed in August, 1903. Two

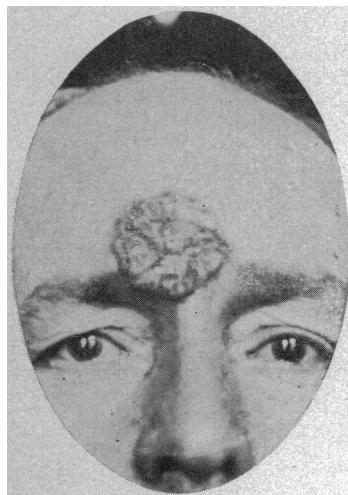


Fig. 6.—Epithelioma in glabella, June, 1902.



Fig. 8.—Rodent ulcer on cheeks, large exuberant epithelioma on scalp (just visible in photograph), July, 1902.

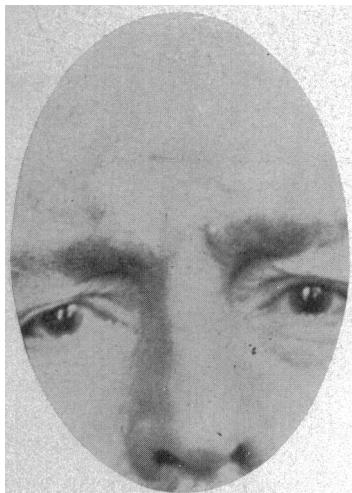


Fig. 7.—Result in July, 1902, which was maintained without recurrence until patient's death from nephritis three years later.

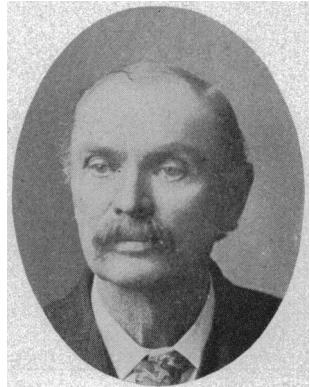


Fig. 11.—Photograph of patient shown in Fig. 10, August, 1907, after five years.

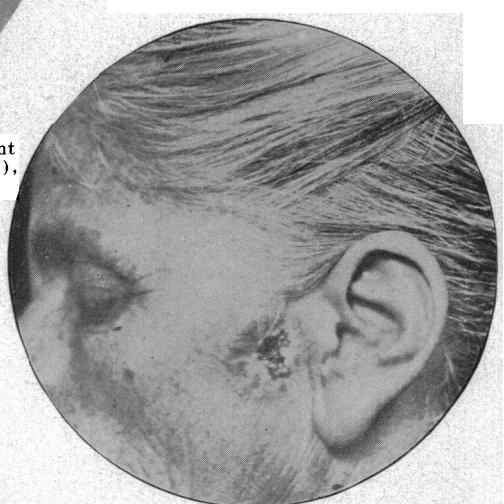


Fig. 12.—Epithelioma, November, 1902.



Fig. 9.—Photograph of patient in Fig. 8, July, 1907, five years later.

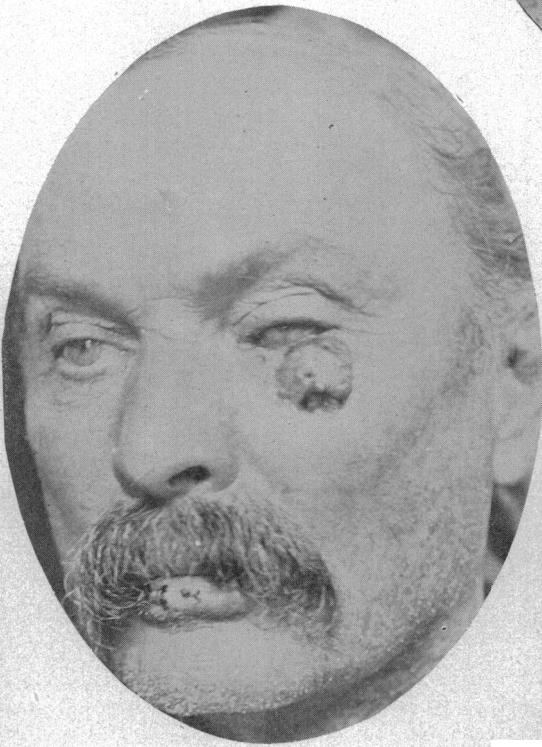


Fig. 10.—Epitheliomata, lower lip and lower eyelid, treated August, 1902.

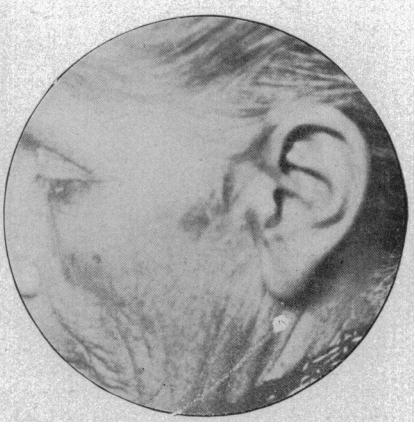


Fig. 12.—Photograph of patient shown in Fig. 12, with healthy scar, June, 1907, after four and a half years.

years later this had not again ulcerated, but I learn that it has since broken down. The other patient was treated in July, 1903. The lesion on the temple was converted into a healthy scar, but the intra-orbital mass did not disappear. The patient is still living, but he has become an Eddyite and I cannot learn the present condition.

Case 12 of this group is an epithelioma of twenty years' duration, recurrent after numerous operations, and involving

both alae nasi and the adjacent portions of the cheeks (Figs. 26 and 27). This patient came under treatment in April, 1901. She was symptomatically cured within a few months, except for two minute suspicious nodules near the nose, one on the right side of the face, the other on the left. The one on the right side of the face was excised one year later, and the disease has not recurred on that side. The suspicious

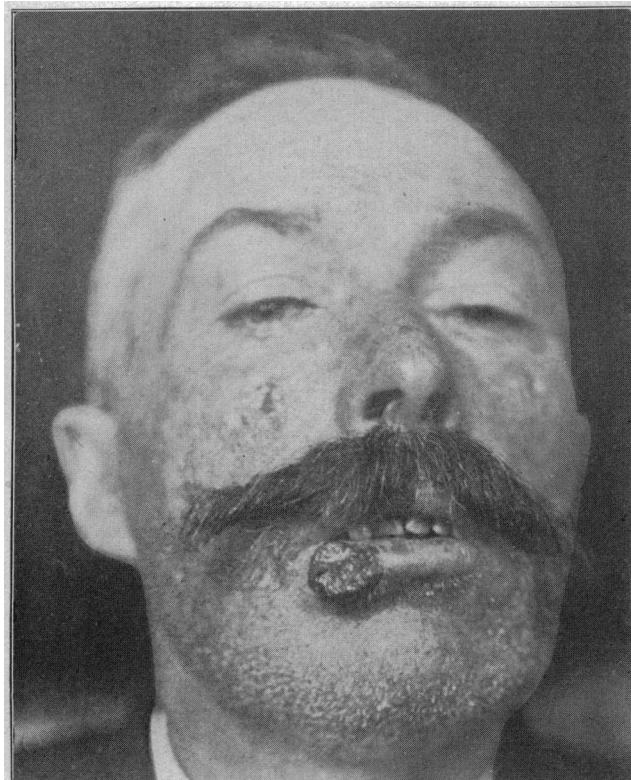


Fig. 14.—Epithelioma of lip, March, 1903.

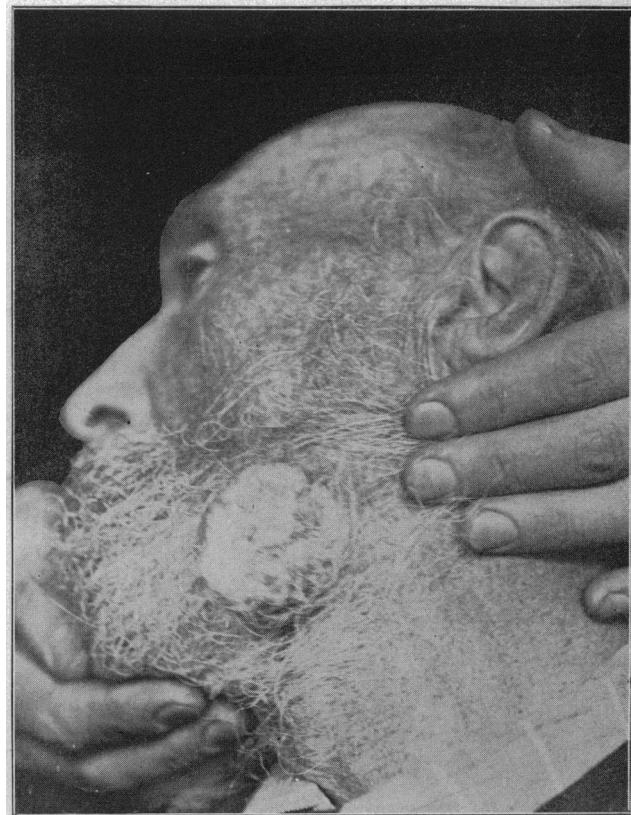


Fig. 16.—Epithelioma, April, 1903.

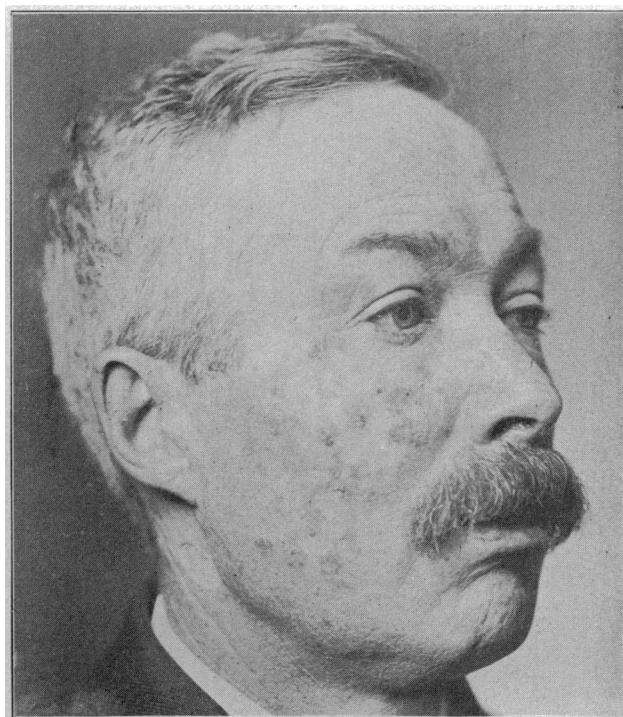


Fig. 15.—Photograph of patient shown in Fig. 14, with healthy scar, April, 1907.

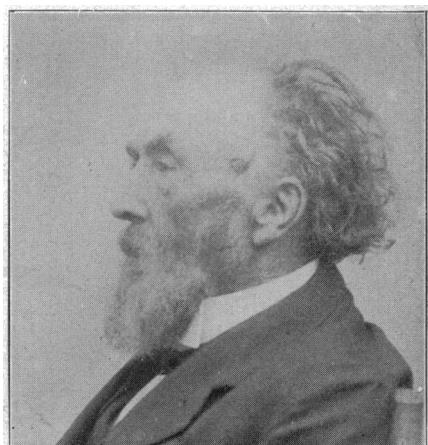


Fig. 17.—Photograph of patient shown in Fig. 16, with healthy scar, April, 1907, after four years.

nodule on the left side of the face remained quiet for five years; within the last year, however, it has grown somewhat, and in July, 1907, this was removed by operation. This patient was practically well for five years, but has a small lesion on the left ala nasi now.

Cases 13 and 14 in this group were very extensive epithelioma which had entirely resisted other forms of treatment. Case 13 (Figs. 28, 29 and 30) was an epithelioma, in an old woman, involving almost the entire forehead, the upper and

lower lids and the eye on the left side, the upper lid of the other eye, and the upper half of the nose. This patient came under treatment in May, 1902. The lesions were entirely healed for over four years. In 1906, four and one-half years after the case came under treatment, an ulcer developed in the center of the forehead. This patient is still under my care with an ulcer in the center of the forehead, which has entirely destroyed the frontal bone over an area the size of a silver dollar, but under *x*-ray exposure has remained quiescent for months. In this case the patient was symptomatically re-

size of three fingers. This improvement was maintained in the summer of 1906, when the last report was received.

Case 15 was an epithelioma of the upper lip, which had perforated the lip and involved the septum nasi, in a woman over 90 years old and extremely feeble. In this case complete healing was obtained, which persisted for about a year. The disease then recurred without further treatment, but under treatment was held in check until the patient's death from natural causes two years after coming under treatment.

Case 16 was one of deep-seated epithelioma, the size of a

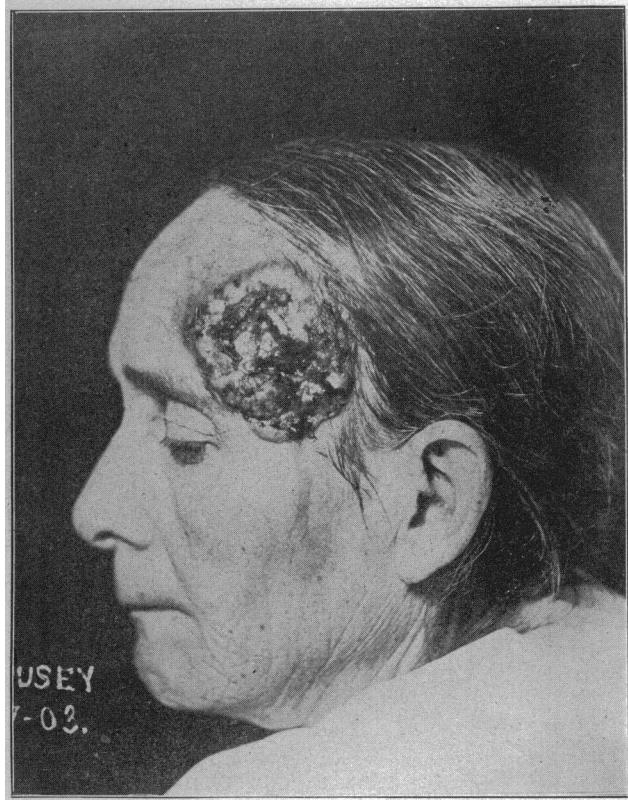


Fig. 18.—Epithelioma, April, 1903.

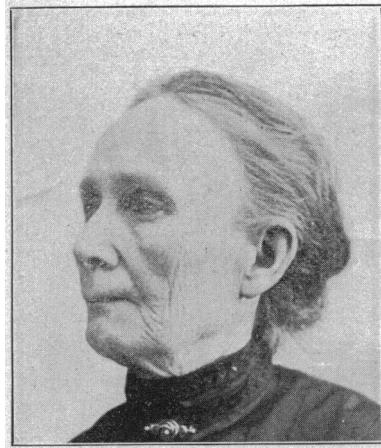


Fig. 19.—Photograph of patient shown in Fig. 18, May, 1907, healthy scar for four years.

lieved of a hideous epithelioma for four and one-half years, and her life has been prolonged in comparative comfort to the present time.

Case 14 was an epithelioma larger than the hand and very deep, situated over the middle of the spine, in an old woman. The patient came under treatment in June, 1904, and the lesion was reduced to a painless, apparently benign, ulcer the



Fig. 20.—Epithelioma, April, 1903.



Fig. 21.—Photograph of patient shown in Fig. 20, July, 1907, after four years.

silver dollar, in the center of the cheek, in a very old woman. This patient came under treatment in April, 1904. The lesion was made to disappear, except for some subcutaneous induration. Regrowth did not begin until a year later, but when the tumor recurred it caused the patient's death.

Case 17 was an epithelioma of the lower eyelid which came under treatment in December, 1903. Healing of the lesion was

produced, but later a recurrence developed for which the patient was treated by another physician with the α -rays. At the present time he remains well, nearly four years since he came under my care. This case is actually a success, but not mine.

Although these cases can not be classed as technically successful, the improvement obtained in many of them

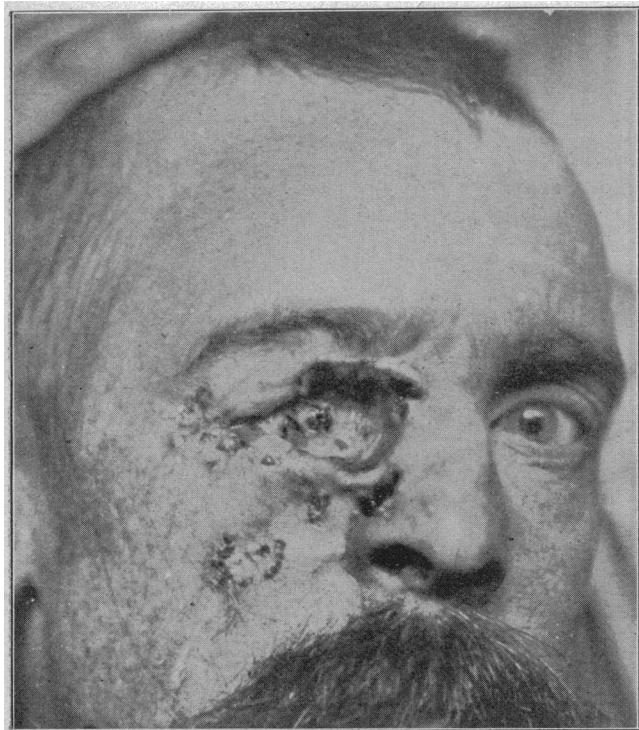


Fig. 22.—Epithelioma, December, 1901.

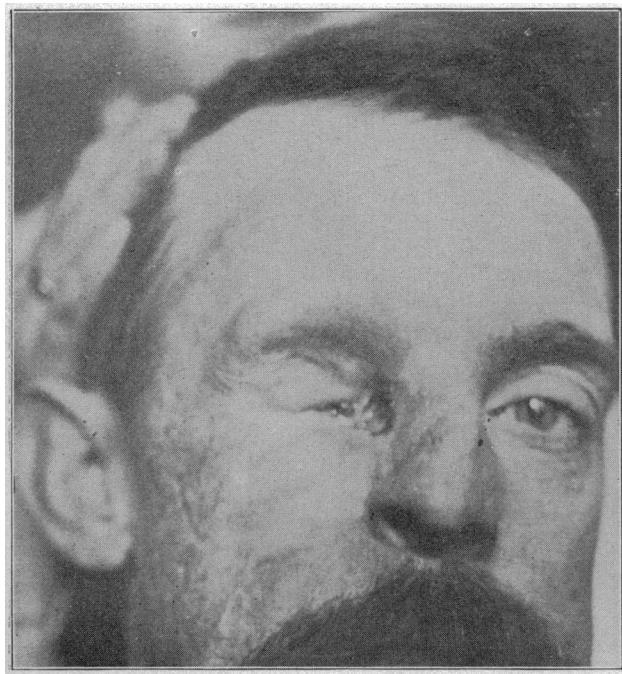


Fig. 23.—Same patient as in Fig. 22. Result, March, 1902. This improvement was maintained without treatment for about one year. Patient classed as distinctly benefited.

is, I believe, one of the strongest illustrations of the usefulness of α -rays. The cases, as a whole, represent a class which is utterly hopeless, with extension of the disease so widespread that complete removal by surgical

measures is practically impossible. To take such patients and improve their lesions to the point where life is bearable or they are symptomatically relieved, is to do what can be done in no other way.

FAILURES.

Twelve cases are classed as failures. Nine of these were recurrent after previous operation and three were primary. Eight of the twelve cases were hopeless from

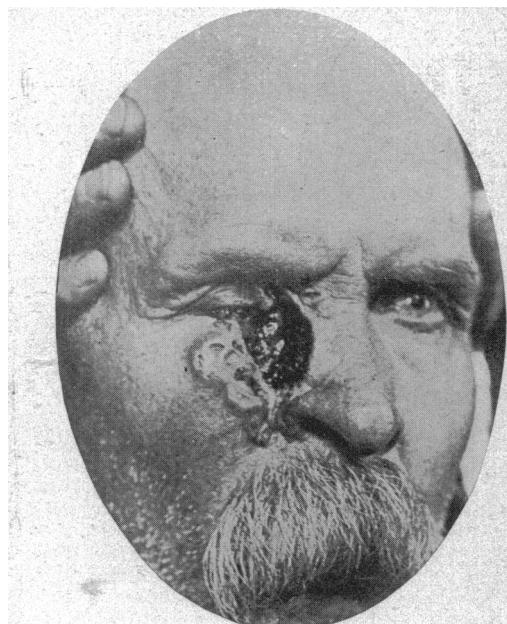


Fig. 24.—Epithelioma, July, 1902.

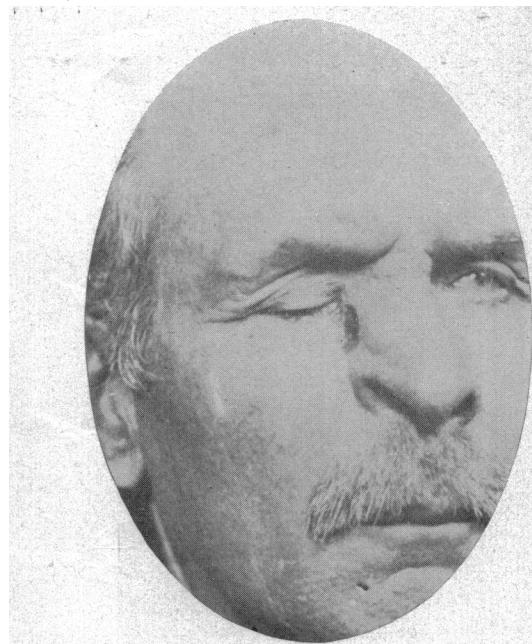


Fig. 25.—Condition, March, 1903, when patient shown in Fig. 24 disappeared. Classed as distinctly benefited.

the standpoint of surgical interference. Five of these eight were epitheliomata which had spread deeply into the orbit. Two were epitheliomata which had completely destroyed the nose and had extended deeply into the bones of the face. One case was an epithelioma which had destroyed the lower half of the ear and had invaded the neck. Seven of these eight patients were treated for

but a short time and really should not be considered. The eighth case, a very extensive epithelioma which had destroyed the nose, was kept under treatment until the patient's death without appreciable improvement from the use of *x*-rays. The ninth case of the twelve failures was an epithelioma in a man, age 60, which had destroyed the lower eyelid but did not show palpable evidences of involvement of the orbit; healing was pro-

months, and without further treatment at my hands the carcinoma progressed and finally caused his death. Case 11 was a recurrent, superficial epithelioma of the forehead which was healed, but later there was a recurrence, for which the patient was treated by another physician and she is, I believe, now well, five years after I treated her. Case 12 was a recurrent epithelioma of the side of the nose and inner canthus, which I healed six



Figure 26.



Figure 27.

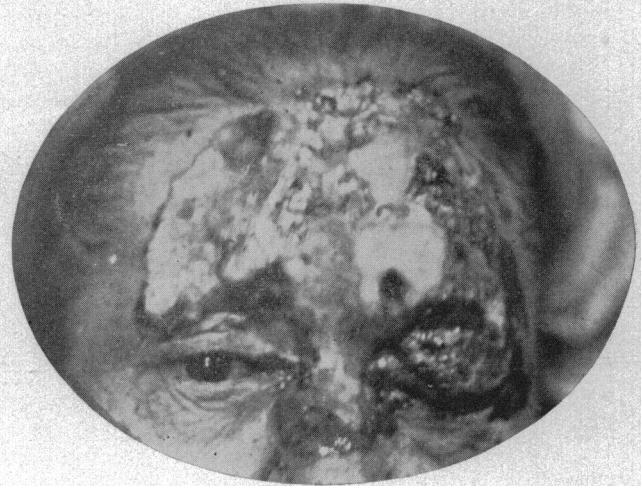


Fig. 28.—Rodent ulcer, May, 1902.



Fig. 29.—Patient shown in Fig. 28; condition November, 1902, four years thereafter.

duced in this case and the patient then abandoned treatment. Two years later I was informed that there was evidence of recurrence. The tenth case was a large epithelioma of the back of the hand in a man aged 68, referred to me by a surgeon. Temporary healing was produced, recurrence took place in the course of eighteen

years ago. In the last few months she appeared with a small epithelioma on the bridge of the nose near the site of the original lesion. The new lesion has promptly yielded to *x*-rays.

Cases 9, 10, 11 and 12 in this group might be classed as distinctly benefited, but in view of the fact that they were cases which might have been cured, they are classed as failures. Amputation of the hand, I believe, would have saved Case 10. Case 9 would, I believe, judging from my experience in orbital carcinoma, have been a

surgical failure. It had recurred already after operation. Case 11, I believe, and Case 12 are at present well and are not actually failures.

SUMMARY.

Of the thirty-one cases which are classed as not entirely successful, twenty-eight were cases which had failed of relief under other forms of treatment; only three were primary cases. These three cases were all in the group of failures; they were all carcinomata involving the orbit and were inoperable. There are in this entire list of thirty-one cases not successful only five cases in which, in my opinion, there was any hope of cure by other methods of treatment. All of these five cases had previously been treated surgically and all were referred to me by surgeons. One of these five cases, Case 2, in the practically successful group was an epithelioma involving the external auditory canal. The other four were Cases 9, 10, 11 and 12 among the failures which have been considered in the preceding paragraph.

There is, however, room for quibbling about all of the cases which are not radically successful. Counting then the 31 cases which were not radically cured as failures, there remain eighty successful cases in a list of 111 successive cases of epithelioma treated more than three years ago, a showing of 72 per cent. of successful results. This record will, I believe, bear comparison with that of any similar group of cases treated by any other method.

ADENOMYOMA OF THE UTERUS.*

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With the employment of the more exact clinical methods of examination and with the systematic study of all uteri removed at operation we have gradually gained an insight into the various diseases of the uterus.

Hemorrhage is one of the cardinal signs of carcinoma of the uterus, whether the disease be situated in the cervix or body. In the early stages of the disease an examination of a portion of the cervix or of scrapings from the body will as a rule enable the pathologist to say positively that a malignant growth is present.

Where uterine myomata exist hemorrhage may or may not be present, this phenomenon depending entirely on whether one or more of the myomata are partially or completely submucous.

Uterine hemorrhage also occurs where tubal pregnancy exists and is a frequent accompaniment of an acute tubal infection and is often noted where an ovarian cyst is present. In each of these cases the attending physician may gain a satisfactory clue as to the existing condition from the history.

Hemorrhage may be due to a constitutional tendency. Here also the family history will materially help the surgeon to make a satisfactory diagnosis.

In my experience there are three other conditions that are frequently responsible for uterine bleeding.¹ In the first group the patients are usually from 18 to 25 years of age. Much hemorrhage occurs at the menstrual

period. On curettage the surface epithelium is found intact and the glands are normal, but there is a great increase in the stroma cells, and in their nuclei many nuclear figures are found. In such cases curettage every three or four months for a period of several years is often necessary. The hemorrhage then usually ceases. I reported two such cases on page 479 of my book on Cancer of the Uterus.

In the second group of cases the patients have excessive menstrual bleeding and occasionally an intermenstrual flow. The histologic picture of the scrapings is characteristic, and I am at a loss to give the composite picture a name. The surface epithelium is intact, the glands are large and some of them are round and cystic, but the cystic change is not due to occlusion and pressure, as the epithelium instead of being atrophic is much thickened. The stroma is very rich in cell elements and the veins are often much dilated. In all cases where such conditions exist hemorrhage is present.

It is with the next group, namely, adenomyomata, that



Fig. 1.—Diffuse adenomyoma of the posterior wall of the uterus, Gyn.-Path. No. 661. The uterus has been amputated through the cervix. The anterior uterine wall is unaltered. The posterior wall from cervix to fundus is greatly thickened, owing to the presence of a diffuse myomatous growth lying between the mucosa and the outer covering of normal muscle. This diffuse growth consists of fibers forming whirls, but also passing in all conceivable directions. It encroaches to a slight extent on the uterine cavity. At *a* we see the junction between the diffuse myoma and the normal muscle. The fibers of the one, however, blend imperceptibly with the other, and it would be impossible to shell this growth out, as can be done with discrete myomata. Near the internal os is a small polyp. The uterine cavity is somewhat lengthened. The mucosa lining the anterior wall is of the normal depth, but that covering the posterior wall is considerably thickened and at two points indicated by *b*, it can be traced for a considerable distance into the myoma. At *c*, just along the lower margin of the growth, the mucosa can be seen penetrating the uterine wall for fully 1.5 cm.

we are here chiefly interested. To the pathologist we are indebted for giving us the first clear and succinct account of this disease, and yet he can not aid the clinician in its diagnosis, as his examination of the uterine mucosa will yield nothing but perfectly normal mucous membrane.

* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907. The article is here abbreviated, but the complete article appears in the Transactions of the Section and in the author's reprints.

1. Uterine polypi are purposely omitted.