contained in the anonymous attack. This was enough for the author of the paper. Turning to me with smiling satisfaction, he whispered: "At last I've found the fellow. Now watch while I wind him up."

The unconscious victim little imagined that he had short-circuited a live wire that had been charging itself for months. The result was startling and overwhelming. The Academy was spell-bound at the vehemence of the author's invective sarcasm, and when the excited speaker took his seat it was plain that the victory was entirely on his side. The only comfort for the vanished one was complacently to blow and cool the finger that he had so foolishly put in the fire.

But this was not the end of the matter. For a long time afterward, whenever the volunteer critic appeared at the state meeting with a paper, he was sure to have one, at least, who would take issue with him. Nor did they ever after exchange views other than at a safe and respectful distance in the debating arena. The explosion of mutual antagonism had blown them so far apart that each was on the opposite side of any possible reconciliation. Nobody, however, knew better than I that both were at fault for meddling with somebody else's fireworks; and so at one of the meetings, I, with an innocence I could not feel, asked my Albany friend, "Why do you always worry Dr. G.?"

"Do you not remember his published criticism of my paper on fractures?" replied he.

"But he did not write it," was the rejoinder.

"Who then?"

"It was I."

"How absurd it was," he laughingly said, "that I should have come to you, of all others, for help under the circumstances."

"Yes! But didn't I do my best to help you silence the real man?" was the only excuse I could offer.

And so in my conscience-stricken way I satisfactorily untangled a ludicrous snarl of misdirected purposes.

THE ULTIMATE RESULT OF THE ROENTGEN TREATMENT OF CARCINOMA OF THE BREAST.

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A review of the literature of carcinoma of the breast during the last year reveals but little from the pens of those operators whose experience in the use of the Roentgen ray is great enough to entitle their utterances to respect and attention.

On the other hand a number of articles have appeared in the various journals which, on their face, betray ignorance and inexperience. The writer of one of these after relating a deplorable series of surgical mishaps arising during an attempt to operate on a breast which had been rayed by another operator, accuses this preliminary treatment of a number of unpleasant things and ends with a denial of the ability of the ray to produce any tissue changes whatever beyond a dermatitis, basing these sweeping assertions on an extended experience of 6 cases.

Such articles as this, which is merely an example of a number of others to which my attention has been drawn during the year, are not entirely worthless since they serve to produce a thrill of amusement and compassion in the minds of those who have sufficient expe-

rience to enable them to judge correctly of the value or otherwise of this agent in the treatment of the condition noted, but unfortunately the widespread dissemination given such misleading statements by the various journals is liable to lead to a misapprehension on the part of the profession at large who have but little time to investigate such matters and are apt to give most attention to the loudest noise.

In one such article a technic was employed for deep-seated carcinoma which was exactly suited for the treatment of lupus or superficial epithelioma and diametrically opposed to those principles enunciated repeatedly by the men who have announced certain degrees of success in the treatment of deep-seated carcinoma, primary or recurrent.

In apparent ignorance of the fact that *x*-ray possesses no power of independent judgment, the author, after using a ray which is absorbed by the skin, boldly states that from his extensive experience of 6 cases, he has proven that the radiation from an excited Crookes tube produces superficial effects only and is incapable of effecting tissue changes at a depth greater than $\frac{1}{4}$ inch below the surface.

I do not believe that any false modesty should be allowed to prevent the challenging and direct controversion of such palpable misstatements. It has been repeatedly demonstrated that a capable apparatus in the hands of a competent operator can be made to produce radiations so penetrating that they may be absorbed and rendered effective therapeutically at any depth in the body, in fact, the skin of the back may be affected even to the production of a marked dermatitis by radiation directed toward the front of the chest, thus passing entirely through the body. I do not know of any way by which those members of the profession may be taught who persistently ignore and disregard the repeated statements of those physicians who have devoted years to this work and have freely formulated and disseminated exact and explicit directions whereby any other physician of intelligence can reproduce their technic. There are none so blind as those who will not see, and the only defense seems to be the exposure of the dangerous ignorance of such writers who make up for paucity of ideas with a deluge of words and who base sweeping generalities on individual observations.

SUCCESS OF RADIOTHERAPY.

The power of the *x*-ray to effect distinct cellular change on normal or pathologic tissue is in evidence this year as it was last, with the difference that in the hands of qualified men these effects are produced with a certainty, directness and ease which is the natural result of another year's observation and experience.

At the meeting of this society one year ago, I made the strongest plea in my power for the wider adoption of anti-operative and postoperative treatment of carcinoma. The ensuing year has not convinced me of the error of the position then taken but has only served to strengthen it, and to ground the conviction more firmly that in such anti-operative and postoperative treatment in conjunction with bold and skillful surgery lies the salvation of this class of patients.

During the year some disappointments have appeared. Two cases are to be recorded as ultimate failures inasmuch as deep-seated internal recurrence has manifested itself and will probably progress to a fatal termination. Each of those two patients, however, was suffering from recurrent inoperable carcinoma which, under the influ-

ence of the ray alone, disappeared completely giving the patient over three years of health and happiness.

While it is necessary to class these cases as ultimate failures yet I think that the results obtained more than compensated both physician and patient for the trouble of taking a few painless treatments. A number of other similar cases have shown no tendency to recurrence. Neither of the cases which recurred was subjected to anti-operative treatments. In both, postoperative radiation was begun only when the appearance of marked recurrence forced the adoption of some method of treatment whereon the surgeons announced their inability to confer any further benefit by operative procedure.

If the x-ray is to be employed in a manner to cast credit on it as an aid in the treatment of this class of cases, anti-operative radiation must be insisted on, but if refused, postoperative radiation must be begun coincident with the beginning of recurrence at the latest, and, when the surgeon will consent, should be employed before recurrence has manifested itself, preferably the tenth day after operation. In every such case the mediastinum as well as the site of operation must be rayed.

In no case of primary carcinoma submitted to radiation without operation has recurrence manifested itself, but it must be remembered that in every such case the primary growth had advanced so little that the patient was unwilling to admit the necessity of operation. I am unwilling to believe that the satisfactory result in these cases was due to the absence of operative procedure but attribute it to the primary nature of the growth and the absence of metastasis at the time of the institution of Roentgen treatment.

During the year repeated and renewed evidence has appeared of the actual value of the ray in producing retrograde change in carcinomatous tissue. The adoption of the method of filtration founded on principles established by Roentgen and Walter applied first as a therapeutic aid and its value, proven clinically and experimentally by Pfahler of Philadelphia, has resulted, in simplifying the technic and permitting the administration of much heavier doses with consequent increase in the quickness of response of the disease to the ray. The experience of the past year has been thoroughly satisfactory.

GROWING INTEREST IN RADIOTHERAPY.

The incredulity and antagonism of certain members of the profession in spite of the misleading contradictory reports circulated by the class of observers referred to has shown a marked decrease. The profession in general are manifesting a healthy interest in the possibilities of Roentgen therapy and are beginning to ask intelligent questions thereby making the opportunity for explanation and conviction. It should be the duty during the next year, of every Roentgenologist to perfect himself in the technic of the treatment of carcinoma; to satisfy himself as to the exact value to be given the method as practiced by himself. Extreme conservatism combined with healthy investigation and repeated observation is necessary in order that we may arrive at a true determination of the exact value of this agent in this disease.

Primary carcinoma of the breast should be treated by the ray alone only when the condition or age of the patient presents a strong argument against preliminary operation. The inherent fear of surgery which so many of these patients present must not be permitted to act on our sympathies or bias our judgment but the treat-

ment of primary cases must only be undertaken for good and sufficient reasons.

Free discussion of these problems with the surgeons when the Roentgenologist shows his freedom from prejudice is usually productive of good since when the surgeons become convinced of the actual value of the ray in preventing or retarding metastasis, they will insist that their operation be aided by such prophylactic measure.

Bold assertions of the ability of the ray to cure carcinoma wherever situated without recourse to surgery carry not conviction but contempt to the majority of the hearers and it must be remembered that an assertion of fact and a demonstration of fact are two widely different things.

While I am daily more convinced of the actual assistance which the ray is capable of affording in the treatment of carcinoma I am also more than ever certain that extreme conservatism of statement combined with practical demonstration of actual result is the best way to convince the profession of the ultimate value of radiotherapy intelligently administered as an aid to surgery, not a substitute in the treatment of carcinoma.

CONCLUSIONS.

1. Results are better and more permanent, the earlier treatment is instituted.
2. The value of postoperative radiation has become more and more apparent.
3. Mediastinal recurrence while grave is not a death warrant.
4. Technic is not an accomplishment but an absolute necessity.
5. No tube is too good to use for treatment.
6. Filters are a necessity in the treatment of cancer of the breast.
7. Treat no case that you know can be cured surgically.

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MISTAKES IN THE DIAGNOSIS OF PULMONARY TUBERCULOSIS.*

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The possibility of limiting tuberculosis rests on our ability either to cure those infected or to prevent the infection of others. What we accomplish in both these fields depends very largely on an early diagnosis of the disease. That persons having pulmonary tuberculosis frequently fail to consult a physician in an early stage of the disease and that physicians frequently fail to diagnose early cases that are presented are well-known facts. How often and for how long a period patients are negligent of their symptoms and how often and for what reasons physicians actually fail to diagnose their cases are not so well understood. Among English writers who have recently called attention to the mistakes tabulated in this article are:

BRONCHITIS: Trudeau,¹ Butler,² Miner,³ Landis,⁴ Norris,⁵ Mohr,⁶ Pryor.⁷

* Read before the Rhode Island Medical Society, Sept. 6, 1906.

1. Trans. Association American Physicians, 1901.
2. "Diagnosis of Internal Medicine," 1902, pp. 709 and 837.
3. Penna. Med. Jour., July, 1903.
4. Med. News, Sept. 17, 1904.
5. Med. News, Sept. 17, 1904.
6. Mobile Med. and Surg. Jour., October, 1904.
7. Med. Record, Nov. 25, 1905.