

If we find hypertrophy we simply proceed and enucleate the gland.

Tuberculosis of the prostate is rarely a primary disease, usually being secondary to tuberculosis of the testicle and seminal vesicles, and in those rare instances where we find it as a primary focus, its symptomatology will be largely that of abscess, either acute or chronic, and its treatment will be surgical only in so far as it is an abscess.

During the year, in the course of my office practice, I see a great many cases of chronic gonorrhea with all its complications, and I find that daily I am either examining or treating by massage several cases in which there is apparent enlargement of the prostate gland.

These cases, of course, are simple cases of prostatitis, and yet they are undoubtedly on the road which will bring them in later life to hypertrophy of the prostate. Coincident with these cases, and really the cause which keeps alive the prostatitis and the gonorrhea, is inflammation of the seminal vesicles, and it is really by the emptying of these vesicles, through massage, that we improve and cure the gonorrhea and, to a large extent, the prostatitis, although in long-standing cases it is my opinion that changes have taken place in the prostate from which the gland never recovers.

An analysis then of what I have said to you to-day resolves itself practically into the following: A plea for the education of the public as we meet members of it in our offices, in regard to the dangers of neglected prostatic hypertrophy. A plea for the earlier recognition by the physician and surgeon, and after a careful hearing of all the evidence, the advice to the patient of a much earlier operative interference than has heretofore been the custom, for the sake of cure of symptoms and conditions and the danger to life itself. A plea not to send the patient to a surgeon who elects, or to perform yourself, a suprapubic or a perineal operation without due regard for all the facts in the case, but to advise your patient, and so do yourself, that which shall be the best for the individual concerned, remembering that time in operative work is a very great feature, in the fact that it lessens anesthetic shock in a patient already on the downward path of life.

Of course it goes without comment that this saving of time shall not be at the expense of clean, smooth work, nor is it necessary on the other hand to exaggerate infinitesimal details.

There is no place in the surgery of to-day for either the putterer and bungler, or the man who is all "front" and gallery play, when dealing as we are with life, attempting to the best of knowledge and ability to keep it from fluttering into the "Great Beyond."

JOHNS HOPKINS NEEDS NEW BUILDINGS.—President Remsen of Johns Hopkins University urges the immediate need of increased accommodation for the work in pathology in the medical school. From the beginning, this department has occupied a building owned by the hospital which has become inadequate in size and equipment.—*Jour. Amer. Med. Asso.*

## THE TREATMENT OF SIMPLE INFECTIONS OF THE STAPHYLOCOCCUS AUREUS WITH THE "VACCINES OF WRIGHT."

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IN many cases vaccine treatment is complicated and requires the application of special knowledge, but we have found that there is a certain type of infection in which the vaccine treatment is conspicuously successful and at the same time straightforward and simple. This type of infection consists of localized surface infections, such as boils, carbuncles and septic wounds. In practically all of these cases it is fair to assume that the offending organism is the staphylococcus aureus. Our communication is based on an experience with about one hundred of such cases, which have been obtained mainly from the wards and Out-Patient Department of the Massachusetts General Hospital.

We have found that it is not necessary to prepare the vaccine from the identical organism of the lesion, an "autogenous vaccine," but that these cases do equally well when treated with a vaccine of staphylococcus aureus derived from any source, a "stock vaccine." The stock vaccine is prepared according to Wright's method and put up in bottles of 50 cc., each cubic centimeter of which contains 600,000,000 dead organisms. We have found that vaccines are not so efficacious after they have been kept for two months, and we therefore prepare fresh vaccines about every six weeks. They are preferably kept in a cool, dark place.

In many of our earlier cases we followed the opsonic index, but we have found that equally good results could be obtained without the index. We have inoculated our patients at intervals of four days. This period had been arrived at by the early studies on the index by the writers and by Dr. Roger Kinnicutt, and by watching the clinical manifestations of the lesions. We give as an initial dose  $\frac{1}{2}$  cc. containing 300,000,000 organisms and at the second inoculation a full cc. or 600,000,000. This last dose is repeated every four or five days until the lesions are cleared up. As a rule two or three inoculations will clear up a single focus; a boil will have discharged and dried up while a carbuncle will have sloughed out and left a clean and granulating base. Most cases will have regained their natural immunity and will require no further treatment. Some, however, will not regain their immunity for a longer period, and during that time inoculations to provide an artificial immunity are necessary to prevent a recurrence of boils. These patients have been inoculated at intervals of seven days for three or four times after their acute lesions have been cleared up and then they have been instructed to report for inoculation immediately on the appearance of the smallest pustule. By these infrequent inoculations we have found it possible to prevent the recurrence of lesions during

a period of six months in a patient who has not been free from boils for two years.

The inoculations are given deep into the subcutaneous tissues (previously sterilized with alcohol), preferably in the abdomen or back, choosing a region which is free from the pressure of clothing. A fresh site is taken for each successive inoculation to avoid the production of a local immunity. We have always boiled our syringes and have had no suppuration or anything more serious than a trifling discomfort at the site of inoculation. A slight constitutional reaction is sometimes noted, especially after the first inoculation. It has been present in about one half of our cases and usually shows itself in headache, backache and lassitude. These symptoms appear a few hours after inoculation and have entirely disappeared in twelve hours. We have never seen changes in temperature, cutaneous eruptions, or arthralgias, such as frequently follow the inoculation of sera.

The changes which take place about the lesions are striking. There is a marked diminution in the pain and tenderness. After twenty-four hours there is a profuse discharge which continues until the focus clears up. If the lesion has already broken down and is discharging no further opening need be made, but if the pus is still confined a small opening should be given for drainage. Opening up wide areas of tissue and curetting delays the reparative process. According to the experience of Wright antiseptics nullify the action of the opsonins and have not been used. The pus has been absorbed into sterile gauze. When sloughing tissue has been present it has been removed with forceps. We have occasionally seen lesions disappear during treatment without breaking down.

We have selected a few cases from those which we have treated which will serve to illustrate different types. We are well aware that simple boils tend to cure themselves, but we can only say that patients so afflicted prefer treatment by vaccine to any other method to which they have been subjected. The following is a case of simple boil:

CASE T., about one week before had a boil on neck, which was opened twice and wicked. Neck was sore all the week. Now for two days has had red, indurated tender boil on neck, with some constitutional symptoms. He was given 300,000,000 of stock vaccine of *staphylococcus aureus*. In the morning the constitutional symptoms had disappeared, the boil was discharging freely and there was no tenderness. In four days only the scab remained. At that time a second inoculation of 600,000,000 was given.

With boils about the face this treatment is of value as it prevents unsightly scars as in the following:

CASE P., a middle-aged woman, was seen with a boil the size of a dime, just to the left of the upper lip. The skin at its summit was broken down and there was a slight discharge. She received two inoculations. Four days after the first the boil had discharged freely, all tenderness was gone, and a slight induration, with a serous ooze at its summit was all that remained. A cocoon dressing was kept on during treatment to absorb the discharge.

The great advantage in treating carbuncles with vaccine is that they can be healed in a shorter time without a radical operation and the patients can be at work while under treatment.

CASE H., a young man, first seen on June 11, with a carbuncle on the back of his neck, which was of ten days' duration. It was two inches in greater diameter. He received three inoculations. The sloughing tissue was removed with forceps, as it loosened, and on June 19, all that remained of the lesion was an area of clean granulations the size of a dime, with a surrounding zone of indurated tissue. There had been severe pain until the night after the first inoculation, when the patient had a comfortable night. The pain did not return.

Cases of chronic furunculosis can be cleared up and kept free from serious recurrences.

CASE G. The patient was a doctor, who for several years had had boils of various severity. These had been incised, excised, cauterized, treated by crude carbolic, etc. He presented several typical boils on his neck and one on his face. These were all tender, some discharging. No local treatment was attempted. He was given 300,000,000 of the stock *staphylococcus aureus* vaccine. He was inoculated at irregular intervals of four to ten days. He stated that the inoculation took the pain out of the boils almost immediately, but that they recurred after six days. He was then inoculated every four days for four times. After the third inoculation the lesions were all cleared up. He has had no serious lesions since then, three months ago. He is emphatic in stating that the present treatment was the easiest and most effectual he had ever had.

Most abscesses with good drainage will promptly heal, but there is a certain definite type which will remain sluggish and indolent and will not clear up, as the following case shows:

CASE A. N., a young girl with axillary abscess which was incised and drained. In spite of good drainage considerable induration persisted, which did not yield to hot poultices. There were numerous small pustules about the wound. After ten days she was referred to one of us and immediately given 300,000,000 of stock *staphylococcus aureus* vaccine. Four days later the induration was largely gone and the wound was healing fast. She was subsequently given four more inoculations of 600,000,000 at four-day intervals, the last inoculation being given after the wound had healed.

We have observed a very few cases which have not responded well to treatment. Cultures from these cases have shown them to be infections with *staphylococcus albus* or *streptococcus*. Administration of appropriate vaccines has been followed by a prompt response. These cases are rare.

#### CONCLUSIONS.

1. Treatment with vaccines is the most effectual treatment for boils and carbuncles.

2. Although the vaccine treatment does not prevent recurrence, cases of chronic furunculosis can be absolutely controlled by occasional inoculations.

3. Vaccine treatment is a valuable surgical adjunct in appropriate cases.

4. The treatment of this class of cases can be successfully carried out without the estimation of the opsonic index and without any special technical training.