exact infection one has to contend with. It is a procedure that greatly facilitates the treatment.

The Positive Phase.—After the negative period has existed for about two, or at the utmost three days, the positive phase makes its advent. It is characterized by a decline in the severity of the pathologic process a retrogression of the morbid condition takes place either gradually and slowly or with great rapidity, and at times abruptly, the latter only in exceptional instances, however. This should constitute our guiding factor in repeating the injections, as well as in computing the dosage. At times it may be necessary to repeat the dose at short intervals if no improvement ensues, while again we must not only lengthen the interval, but also reduce the dosage to half of the usual amount, which is twenty millions. As a routine procedure it may be said that twice a week is all that is necessary and the latter should never be exceeded save under exceptional circumstances.

SUMMARY OF RESULTS.

To summarize briefly the results obtained by this particular form of treatment of the affection under consideration, they may be formulated as follows:

1. In acute cases the vaccine acts beneficially, and the time necessary to cure the disease does not exceed four weeks.

2. In some of the complications of gonococcic urethritis, such as epididymitis, cowperitis and acute prostatitis, as well as in gonorrheal adenitis and in involvement of the lymph channels on the dorsum of the penis and in posthitis of the same origin, threatening phimosis, it may be confidently relied on. In the above complications it acts very beneficially and efficaciously and may be considered curative. Lately I have also used it with success in an affection, only rarely encountered during the course of gonorrhea, and which has been denied by authorities, namely, gonorrheal iritis. It is a distinct disease entity and may be seen complicating an arthritis of the same origin or appear independently during the subacute stage of the disorder and during an acute exacerbation of a chronic urethritis.

3. No other treatment, whether systemic or local, is necessary, and irrigations and injections may be entirely dispensed with.

4. In chronic cases it is inert and acts indifferently, owing to the fact that in these conditions one has to deal with a mixed process. The conjoined use of other bacterins, therefore, suggests itself. In these instances the gonococcus vaccine *per se* has reached its limitations.

5. It is a valuable diagnostic agent. It brings to view latent or dormant conditions and thus affords a most important diagnostic means in definitely deciding on whether a given case has been actually cured, which is of inestimable value for sociologic reasons.

6. In dormant gonococcic arthritis it will bring about a recrudescence of the disease. In this sequela it materially shortens its duration and brings about a speedy restitution to the normal.

7. No exact rule can be laid down as regards the dosage and the intervals of the administration of the bacterin; each case must be treated individually.

8. The future possibilities of gonococcic vaccine in particular and opsonotherapy in general are unlimited, promising to give us a new and unexplored field of scientific inquiry. Its bearing on prophylaxis must also be considered and furnishes material for future re-

search. As it now stands the subject is merely in its infancy.

CONCLUSIONS.

Our former conception as to the local aspect of gonococcic urethritis is erroneous and dangerous, endangering not alone the individual, but also the family and state. That the process is not merely local can be readily adduced from its many and far-reaching complications and sequelæ, as well as by the reaction obtained on the administration of the vaccine, confirming beyond controversy the fact that we have to deal with a constitutional or systemic process of varying degrees of severity that should be combated both locally and constitutionally, notwithstanding the optimistic views of many who hold this affection to be solely a local pathologic invasion.

73 Shurly Building.

HYDROTHERAPY: METHODS OF APPLICATION WITH RESULTS

AS USED IN THE PHILADELPHIA HOSPITAL FOR THE INSANE.

WALTER G. BOWERS, M.D.

Assistant Physician, Philadelphia Hospital for the Insane.
PHILADELPHIA.

The purpose of this brief report is to demonstrate what has been accomplished in hydrotherapy in the Philadelphia Hospital for the Insane since the installation of the hydrotherapeutic plant in April, 1907.

The apparatus and the facilities for hydrotherapy are as follows: A douche room containing rain and spray baths, sitz baths with liver spray, perineal and Scotch douche, steam and immersion baths, all operated from control table; shampoo apparatus with marble massage table; three hot-air cabinets for patients sitting, and one for patients reclining; dressing and lounging room with four pack and massage rooms; eight special porcelain tubs for continuous flowing bath, four for males and four for females.

The hydrotherapeutic department is under trained male and female operators, the male patients receiving treatment between 8 and 12 a. m., female patients between 2 and 6 p. m. daily.

Selected patients were given special treatment in both continuous baths and douche room. During the past sixteen months fifty cases were treated in the continuous flowing bath, the length of treatment being from a few hours to seven days in duration, the temperature of the water ranging from 85 to 110 F. Most of the patients treated were excited ones, in whom motor restlessness was marked. They represented cases of mania, acute, chronic and recurrent; excited types of dementia præcox; maniacal episodes of epilepsy, dementia paralytica and senile dementia; alcoholic insanity and insanity of chorea. Most of these patients were greatly benefited by the treatment, especially in the cases of mania, excited cases of dementia præcox, senile dementia and toxic cases, including insanity of chorea.

A brief note on three of the cases will show the improvement observed:

CASE 1.—Daniel D., aged 30, white (mania (acute)). On admission this patient was garrulous, vituperative, restless, noisy and hostile in manner. He was placed in the continuous bath Oct. 16, 1907. The temperature of the water was 100 F. Little or no improvement was noted at the end of the first

day. On the second day the temperature of the water was raised to 105° F. The patient began to show improvement, which gradually continued, and at the end of the fifth day motor restlessness ceased and the patient was no longer garrulous and noisy. In this case a permanent benefit was observed and the patient was discharged a few weeks later, restored.

CASE 2.—Frank D., aged 55, white (toxic insanity, alcoholic confusional), noisy and restless, fearing that he was about to be killed. The patient was placed in the bath June 19, 1907, at 5 p. m. The temperature of the water was 100° F. The patient gradually became quiet, and at the end of the third day was no longer fearful or agitated.

CASE 3.—John P. R., aged 18, white (insanity of chorea). The patient was restless with general choreiform movements. He was placed in the bath June 26, 1907, at 11 a. m. The temperature of the water was 95° F. At the end of three days movements became decidedly less in number and extent.

No restraint is used while patients are in the bath. They are allowed house diet with milk and eggs between meals, and careful attention is paid to the emunctories. Sedatives and all forms of internal medication are removed while the patient is in the bath, save on occasional indication for diffusible stimulants. Despite careful padding of tubs, a few patients developed superficial excoriations over the regions of the scapulae, shoulders, buttocks and elbows. Others complained of tender palms and soles, only, however, after being in the tub several days. One case of acute eczema, involving thighs, legs and feet, which was somewhat refractory to treatment, developed in a colored patient after he had remained in the bath five days.

In two other cases a skin rash, resembling impetigo, developed which was transient in character. We have also treated patients with ichthyosis and psoriasis with at least temporary benefit.

The same care used in selecting patients for the continuous flowing bath was used in selecting patients for treatment in the douche room and hot air cabinets, as little save the detergent and slightly stimulating effect of the baths can be expected from hydrotherapy in the treatment of the chronic insane. Excellent results were obtained by the use of hot air cabinets in toxic cases, especially the acute alcoholic insanities, also cases of mania and uremia; patients in such cases were kept in the cabinet until a profuse sweat was induced. While in the cabinet the patients drank freely of water. They were then given a spray and rain bath for three minutes at 95 degrees F., the temperature being gradually reduced to 80 degrees F., save in the cases of uremia, in which the patients were given a sponge bath after sweating profusely.

A number of dementia præcox patients in a dull, stupid and apathetic state, also a few patients with melancholia and neurasthenia, showed considerable improvement both physically and mentally after use of the spray and rain bath at 90 degrees F. for three minutes, followed by the Scotch douche, moderate to full force at 90 degrees F., gradually reduced to 75 degrees F. for two minutes, the douche being played rapidly up and down the entire length of the spinal column.

Patients with saturnism, with the associated paralysis, also the polyneuritis of alcohol, with and without Korsakoff's psychosis, showed marked improvement and recovery by the use of the hot-air treatment and immersion bath, the patient remaining in the tub thirty minutes and being urged to exercise while in the water.

Painful and inflammatory hemorrhoids were treated daily with the perineal douche; as a result the hemor-

rhoids shriveled up and ceased to be painful and inflammatory. It is recognized that constipation is habitual in the insane. Favorable results were obtained by the use of the sitz bath and liver spray daily at a temperature of 100 or 105° F.

For the detergent effect from ten to twenty patients were sent from the ward daily to receive a rain and spray bath. Four thousand such baths have been given during the past year.

Clinical Notes

A COMBINED BRIDGE AND INTRANASAL SPLINT FOR THE CORRECTION OF DEPRESSED DEFORMITIES OF THE NOSE.*

WILLIAM WESLEY CARTER, A.M., M.D.

Assistant Surgeon Manhattan Eye, Ear and Throat Hospital.
NEW YORK CITY.

This apparatus was designed to fill a long felt want; namely, that of a splint that will exert pressure in such a manner that the nasal tissues, once placed in proper position, will be held so until union has occurred. It is recommended for recent fractures, both accidental and operative, for the prevention and cure of deformity, especially depressed deformity.

DESCRIPTION OF INSTRUMENT.

It consists of a bridge made of steel and as light as is compatible with strength (Fig. 1). The bridge is formed by two curved, fenestrated wings 2.5 cm. (1 in.) wide, and joined by a hinge. The distance that these wings can be separated is regulated by a thumbscrew. The edges of the wings diverge to correspond to the shape of the nose, they are padded with rubber, and near the margins are small holes that admit of additional gauze padding being stitched on. The second part of the apparatus consists of two small hard rubber splints, perforated by four small holes.

APPLICATION OF INSTRUMENT.

All the precautions necessary for an aseptic operation are observed and the patient is placed under the influence of a general anesthetic. Assuming that the nasal tissues have been thoroughly mobilized (in doing this I use the method advised by T. Passmore Berens, of New York), the application of the apparatus is as follows: Iron-dyed silk, No. 14, is passed through one of the perforations in the splint and knotted (the hole is selected according to the distribution of the lifting force desired), the other end is threaded into a large curved needle, this is passed from within the nose through the cartilaginous dorsum, just below the end of the nasal bone and near the septum. The splint is now drawn into the nose and adjusted to the roof. This process is repeated on the other side.

The bridge is then applied and the wings adjusted with the thumb-screw to give the proper support to the base of the nasal triangle (Figs. 2 and 3). The sutures are now run through the fenestræ of the bridge vertically above their exit from the nose and drawn tight enough to lift the dorsum into its proper position

* Read in the Section on Laryngology and Otology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.