only, which, if corrected, might prevent any further anxiety. It would be well for every practitioner of medicine to read the very able article by Dr. Samuel Ayres of Pittsburg, on "Gastro-Intestinal and Hepatic Disorders, Especially, Chronic Gastro-Intestinal Catarrh in Relation to the Etiology of Some Cases of Insanity," and that by Dr. Alice Bennett of Norristown, Pa., on "Insanity a Symptom of Bright's Disease." In these articles we have ample argument to look for a cause in many cases outside the brain.

In lunatic asylums we find a wide field for the gynecologist, but many times very unsatisfactory subjects to treat. I am aware we usually look to the brain when searching for the cause of insanity, and many times, I fear, when we should look elsewhere. It is necessarily the immediate seat of disturbances, but the remote cause may be very foreign to that organ.

I am rejoiced to know that such men as my friend and teacher, Prof. George H. Rohé, M.D., Sykesville (Md.) Insane Asylum, now deceased; W. P. Manton, M.D., Detroit, Mich.; Joseph Price, Philadelphia, and others whose very striking articles I have had the pleasure of reading, bearing on the subject, have been giving their attention to this line of thought, but in more heroic measures than I have, as they have resorted to the knife, while I have nothing severer to report than the curette or local application. I feel that they have opened up a new field, for the gynecologist, and established the beginning of a new era for the alienist.

In looking up statistics for Pennsylvania I find that for the year ending Sept. 30, 1891, there were admitted to hospitals, 788 insane women and girls; in 1892, 802; in 1894, 1146; in 1895, 931; in 1896, 806. Of that number there was 9.5 per cent. of the 1891 admissions with a history of uterine trouble given as the cause of insanity. Of these 788, we have the history of 480 only, 308 having no cause assigned for the insanity. In the percentages of the years from 1892 to 1896, inclusive, I have confined myself to the physical causes alone, which include that class of causes only which produce uterine disease or disturbance. These percentages are as follows: In 1892, 21.6 per cent.; in 1894, 29 per cent.; in 1895, 23.3 per cent.; in 1896, 18.3 per cent.; the percentages of all admissions running slightly higher than in 1891. The causes given are child-birth, climacteric, dysmenorrhea, menopause, onanism, menstrual derangement, pregnancy, abortion, puberty, puerperal causes, venery and uterine disease.

Had we the history of the remaining numbers of each year not given, and the same ratio prevailing, we would have our percentage increased to an alarming degree, to say the least.

With these percentages staring us in the face, should we not be more concerned about our patients who are suffering from uterine disease, and especially those of a neurotic type? Many times, if the uterine disturbances were relieved the insanity would be removed. I can not refrain from referring to another woman in the West Virginia Hospital for the Insane, who was suffering from intrauterine vegetations and dying a slow death from slight continuous hemorrhage therefrom. After dilatation and a thorough curetting, she made a complete recovery from the uterine disease and was discharged quite well mentally. Knowing, as many of us know, the association of uterine disease and mental disturbances, it is surprising that there has not been a closer study into the relations of the two, that we have not more literature on the subject, thereby giving an impetus to the investigation of mental symptoms and their causes

in some remote organ, and to establish a relationship if possible.

No fact has been more clearly established by psychological investigation and neurologic anatomy than that the human anatomy is wholly dominated by the sympathetic nervous system. The whole physical structure is subservient to its influence. It is a despotic force with compulsory requirements. There is no stasis, either active or passive, no modification of the activities, no irritation, however slight, but will manifest itself through the sympathetic nervous system. I have seen, as already stated, in the treatment of insanities the result of uterine disease, the local or surgical treatment of the trouble not only cure the uterine disease, but effectually cure the concomitant disease occurring in the brain, thus showing the mysterious (?) and unaccountable (?) connection between them. A woman becomes the victim of nymphomania, amenorrhea, dysmenorrhea or some one or more of the many forms of uterine disturbances; it may take on one of the amatory phenomena, especially of nymphomania, a religious turn, devotional enthusiasm of so violent a character as to necessitate removal to a lunatic asylum—and these are not fictitious cases—and all this because of local irritation.

Finally, we may have a uterine trouble, an irritation, transmitted through the hypogastric, spermatic and other ganglia and plexuses, from cell to ganglion, passing onward to the sacral, to the cord, the medulla oblongata and the cerebellar and cerebral ganglia, finally by coronata radiata fibers to the cortex of the brain, that most valuable distribution of nervous matter, the seat of mentality and intellectuality, ending in a complete overthrow of the noblest propensity of woman, driving her to a madhouse, there to drag out her existence within the walls of her life prison. Thus we have the beginning and end of a very sad picture.

TREATMENT OF CHRONIC CROUP.*

BY EDWIN ROSENTHAL, M.D.

PHILADELPHIA.

Many of us who practice intubation in the treatment of laryngeal diphtheria occasionally meet with a case that causes us much care and annoyance, by reason of the duration of the symptoms of stenosis. Since the advent of the diphtheria antitoxin our methods of treating intubation have changed. Where, before the use of this remedy, we permitted the tube to remain in the larynx at least a week before we thought of disturbing or removing it, we have found that, in the majority of cases, the tube can be removed, or removes itself by expectoration, before the period of five days, or 120 hours. If we are called early enough, that is, before intubation becomes a necessity, our cases—in the majority of instances—recover promptly on the third day, and at the most the symptom of stenosis disappears before the fifth day. Still, we meet cases that are not bad enough to require the presence of a tube, yet require treatment, by reason of that symptom—stenosis remaining or appearing at certain intervals. I have noted this quite frequently, and more remarkable, since the antitoxic action of the serum had removed all visual traces of the disease and the tube removed—if the case required it—and the case pronounced cured, the symptom—stenosis would return in a week or ten days, and would require a reintubation and a further treatment.

The question in our minds is the cause. I wish to ex-

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clude any injury to the larynx by reason of the intubation, or by the continued presence of the tube in the larynx, as these cases are in the majority of instances a mechanical injury. And the cases I speak of are found frequently where intubation was not performed, and another cause than this must be looked for. As an instance, I will briefly describe a case:

William O., aged 3 years, of Swedish parentage, was taken ill with clinical evidence of diphtheria on Jan. 6, 1899. Bacteriologic test conclusively proved the presence of the K-L bacilli, also the streptococcus. An injection of 2000 units of the diphtheria antitoxin was administered, with the result of a disappearance of all visual traces of the disease in the pharynx. On January 14, the patient had a croupy cough, which was treated with an expectorant mixture, and three days thereafter symptoms of stenosis became marked, but not to such an extent as to necessitate intubation; at this time 2000 units of diphtheria antitoxin were again injected, with the result of somewhat relieving the stenosis. The lymphatic glands at the angle of the jaw were somewhat enlarged. Medical treatment was continued and the symptoms of stenosis relieved, but they reappeared, and February 10 were as bad as if no treatment had ever been given. Bacteriologic examination—five weeks since the first—showed an absence of the K-L bacilli, but still the presence of the streptococci. At this date, 10 c.c. of the antistreptococcic serum were injected, with the result of a disappearance of all symptoms of stenosis on the third day thereafter, and a perfect cure.

The presence of the streptococcus pyogenes as a complication in diphtheria is very well known. Its absence would prove the exception; but that the symptoms of chronicity in this affection should be ascribed to it, I think is something new. The strepto-infection may alone prove sufficient to produce the disease known as croup, as may be verified by bacteriologic test, and the knowledge thereof will be a sufficient guide to the treatment.

The cause of "chronic croup" may be otherwise than this. I have seen the too energetic use of hydrogen peroxid produce croup secondarily to other varieties of diphtheria, and in cases intubated, I believe, the constant use of the peroxid may be nothing but injurious. Therefore, in treatment, and since the advent of the antitoxin, I have used the peroxid simply as a lubricant, for by its use I have been enabled to more readily practice intubation. Its further use I have limited, and only diluted and with an atomizer, to those instances where the tube became clogged with inspissated mucus or other secretions from the throat. Using this remedy so carefully, I can not charge to it the cause of the constant intubation, an intubation that may last from five to eight weeks, or in cases where the tube was removed and the case pronounced cured, the necessity of intubation after the lapse of seven or ten days. I have elsewhere reported (*Phila. Med. Jour.*) a case of chronic croup wherein intubation was practiced, the tube removed, and reintubation on the eighth day thereafter, antitoxin meanwhile being used; and another case intubated, the tube removed by expectoration on the third day, where the symptoms of stenosis recurred every week for three weeks, and in which over 20,000 units of diphtheria antitoxin were used until a final recovery. The treatment of these cases was strictly antitoxic, but when I saw there was no response, and that some other factor was at work, producing the stenosis, I investigated, both clinically and bacteriologically, with the result that I found the main and certain cause of chronic croup was, in the complicat-

ing streptococcic bacteria, and by its presence so guided my treatment that my results have been most gratifying.

The treatment is as follows: When I am called to a case of croup, whether it requires intubation or not, I immediately use the antitoxin. I then make the bacteriologic test. If I find the presence of the streptococci I immediately make a further injection of the antistreptococcic serum, and continue with the antitoxin, as the case may require. If, however, as I have seen sometimes, there is a negative result as regards diphtheria, and a positive result as regards the streptococci, I drop the antitoxin and continue the treatment only with the antistreptococcic serum.

The method of its use is precisely similar to the antitoxin, with this exception. Where in the antitoxin treatment a smaller dose is begun, and a gradual increasing dose the rule, with the serum a large initial dose is the beginning and the same or a smaller dose follows. The time to give the injection is also different. In the antitoxin, any time is of value; with the serum, the early morning or when the temperature begins to rise. The parts chosen are the loins or side of the chest. The parts are cleansed with alcohol soaked on corrosive cotton or gauze, and after injection the aperture is closed with iodoform collodion. The commencing dose is 10 c.c., or even a larger quantity, and this is repeated on the same day or the day following, and is continued until its influence is shown by a decline in the temperature and pulse-rate, and an amelioration of all symptoms. The duration of the treatment is the same as with the antitoxin, and on the third day we may note evidence of a cure. The serum can be used to any quantity, and is as free from danger as is the antitoxin, the same sequelæ as noted with the antitoxin, as eruption, albuminuria and the like, are found here, and in all the manifestations the results are equal. In all cases where the bacteriologic examination shows the specific germ, the serum should be used, and in those cases of chronic croup, or where the diphtheria bacilli are absent, it is always in order to use this serum.

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DISCUSSION.

THE CHAIR—The Chair would like to ask the Doctor the length of time required to find the streptococcus infection.

DR. EDWIN ROSENTHAL, Philadelphia—Twenty-four hours.

THE CHAIR—And in the meantime you use the antitoxin?

DR. ROSENTHAL—To be sure; it is diphtheria. But if I find only streptococci, then I use the antistreptococcus serum.

THE CHAIR—I notice the diphtheria antitoxin has been used over and over again, but ordinarily it is the Doctor's experience, I presume, that the antitoxin to be of value primarily should be used within a very short time.

DR. ROSENTHAL—In a very short time, yes.

THE CHAIR—I mention that because in going over the literature I found one case of death after the use of antitoxin reported and it was rather interesting to say the least. The patient had had diphtheria for some time without the parents allowing antitoxin to be used. On the fifth day the physician gave an injection of nitroglycerin and antitoxin at the same time, and it was claimed that death was due to antitoxin. Of course we know that is not true.

DR. GEO. L. RICHARDS, Fall River, Mass.—I would like to know what the essayist means by the word "croup."

DR. ROSENTHAL—Any stenosis of the larynx due to diphtheria. When I find, as I do sometimes, that it is not due to the Klebs-Loeffler bacillus but to streptococci, it is still croup, but of course not true diphtheria.

THE CHAIR—In other words, you use "croup" to mean an inflammatory process causing dyspnea?

DR. ROSENTHAL—Yes; there are cases of croup not due to the diphtheria bacillus.

QUESTION—I would like to ask Dr. Rosenthal if he has in any case of diphtheria been unable to get the bacilli?

DR. ROSENTHAL—Yes.