

amount to much; gained five and a quarter pounds since the beginning of treatment; present weight, 115¼ pounds.

Patient lost weight during the first few weeks; my books give no record of this, but I remember the case well. Gave syrup hypophosphite soda, half teaspoonful, t. i. d., after meals.

Report, Oct. 14, 1894: Has been doing nicely all that time; during the last few days she complains of pleuritic pains; hardly any cough; has gained two pounds more; present weight, 117¼ pounds. Syrup hypophosphite soda, same dose and mustard plaster to the chest.

It would make the report too lengthy to continue the record. Patient took the hypophosphites steadily up to August, 1895, that is, a little over a year, counting from the day of first consultation. From August, 1895, she took the hypophosphites only occasionally. During the year 1896, she called several times at my office feeling generally well, and working every day. The least little cough, or loss of strength, was always promptly attacked with a bottle of syrup hypophosphite, and the battle ground was ours in a day or two.

It was a hopeless case of four years' standing, with a large cavity already formed, as it came under my observation. As I saw her last, I could not help thinking about "then and now."

The cases Nos. 27 to 45 inclusive, were similar in their general features to case No. 1. It would be tiresome to give the histories of them in detail. The cases I have outlined are fairly typical of the others, and my favorable experience in the past, is now continually being repeated, as new cases come under my care; all progressing well, and may form the subject of another contribution in the future. There can be no uncertainty concerning the diagnosis; every case was established beyond a doubt by the detection of the tubercle bacillus.

A BRIEF REPORT OF THE RESULTS OF A BACTERIOLOGIC INVESTIGATION OF THE NASAL MUCUS IN ONE HUNDRED CASES OF CHRONIC NASAL DISCHARGE.

WITH SPECIAL REFERENCE TO THE PRESENCE OF THE KLEBS-LÖFFLER BACILLUS.

Read before the Philadelphia County Medical Society, Jan. 27, 1897.

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Although a full report of the following investigations will be published later, still it may perhaps be of interest to those who are present this evening to hear a brief report of the results obtained. The patients included in the investigation all had one thing in common, namely, a chronic nasal catarrh; none of them were subject to any acute febrile affection, but were simply the walking cases that I see daily in my office and at my service in the Polyclinic and Howard Hospitals. Great care was exercised in their examination to exclude all those showing any of the well known clinical signs of diphtheria. The bacteriologic examinations were made by Dr. W. J. Gillespie, and in the more important cases afterward reviewed by myself. The examinations embraced 113 cultures of specimens taken from 100 different patients. Of these patients, twenty-five suffered with chronic atrophic rhinitis, thirty-one with chronic hypertrophic rhinitis, fourteen with chronic rhinitis, sixteen with chronic purulent rhinitis, seven with nasal syphilis, two with disease of the accessory sinuses, four with acute rhinitis, one with fibrinous rhinitis.

The bacteriologic examination shows the presence of diphtheria bacilli in no less than thirty of the cultures examined, these cultures representing the dis-

charges found in twenty-six different patients. In four additional cultures (obtained from three patients) organisms strongly resembling diphtheria bacilli were present. In fifty-eight cultures, staphylococci were found. Of these, seven were recognized as staphylococcus aureus, five as staphylococcus albus, one as staphylococcus citreus. The great majority of the cultures contained many diverse forms of organisms, such as bacilli, cocci, diplococci, etc. Leptothrix was found in four, bacillus subtilis in six and yeast cells in two of the cultures.

Of the twenty-six patients with diphtheria bacilli in their nasal secretions, eleven were cases of chronic atrophic rhinitis, three were cases of chronic purulent rhinitis, five were cases of chronic rhinitis, three were cases of nasal syphilis, one was acute rhinitis and three were cases of hypertrophic rhinitis. For each disease examined the proportion of cases with diphtheria bacilli was as follows: Eleven in twenty-five cases of atrophic rhinitis, three in sixteen cases of chronic purulent rhinitis, five in fourteen cases of rhinitis, three in seven cases of nasal syphilis, one in four cases of acute rhinitis, three in thirty-one cases of hypertrophic rhinitis, none in two cases of accessory sinuses, none in one case of fibrinous rhinitis.

The following clinical histories were obtained in some of the cases where diphtheria bacilli were present:

John McM., age 16, occupation store boy, consulted me in November, 1896, complaining of nasal obstruction and of mucopurulent catarrh with post-nasal dropping. He stated that the duration of the catarrhal symptoms had been about six months, but although his general health had been below his usual standard, still at no time had there been fever or symptoms of any acute disease. Upon examination of the nose it was seen that the cartilaginous septum was deflected to the right, producing stenosis with marked obstruction, while on the left side the lower turbinal was hypertrophied. Both nasal chambers contained considerable mucopurulent secretion. He also had a chronic granular pharyngitis and some slight enlargement of the tonsils. Cultures were made from the nasal secretion and the bacteriologic report was that it was almost a pure culture of diphtheria bacilli. Upon investigation it was found that a younger sister of the patient had had diphtheria four months previously, and furthermore that different members of the family (which comprised ten children whose ages ranged from a few months to 19 years) had all suffered more or less from nasal catarrh and sore throat during the summer and autumn. This led me to decide to make further examinations. Six members of the family were examined and cultures taken from their nasal chambers, with the following results: One, a school girl of 8, was found to have chronic purulent rhinitis with mucopurulent secretion. Bacteriologic examination showed "a few diphtheria bacilli in involution forms." Another, a girl aged 9, was found to have chronic purulent rhinitis with mucopurulent nasal secretion. Bacteriologic examination showed "staphylococci, numerous leptothrix and numerous small bacilli." Another, age 11, also a school girl, was found to have chronic purulent rhinitis with beginning atrophy and mucopurulent nasal secretions. The bacteriologic report was "staphylococci and long slender bacilli." A fourth member of this family, age 6, a school boy, had purulent rhinitis with beginning atrophy and mucopurulent nasal secretion, also subacute follicular tonsillitis. Bacteriologic report, "large, heavily stained bacilli, resembling diphtheria in form." The mother, age 40, showed fibrinous rhinitis with a thick white membrane clinging to both sides of the septum, with mucopurulent nasal secretion; the mucus membrane of the pharynx reddened and congested (no pseudomembrane on pharynx). Bacteriologic report, "staphylococci and small, irregularly stained bacilli." The mother stated that all the children had been in good health previous to last July, but since then had been continually suffering from a catarrhal condition of the nose and throat. All of the children examined were weakly, listless and anemic, but at no time during the past six months had any of them suffered from an acute illness.

Lizzie C., age 38, mill-worker, sought relief for chronic nasal catarrh, complaining of formation of crusts with thick muco-

purulent nasal secretion, the duration of the symptoms extending back many years. Examination showed an advanced atrophic rhinitis, the lower turbinates had completely disappeared. The middle turbinates were enlarged, congested and polypoid. The pharynx was dry and glazed; mucous membrane atrophied; no membranous deposit seen anywhere. Bacteriologic report, "typical culture of diphtheria bacilli." Questioning and investigation revealed no source of the infection. The patient had no symptoms of any acute condition, and all the members of the family were well. This patient was kept under treatment for some months. Cultures were taken from the nasal mucus at different intervals and with the exception of a time when certain local treatments were being applied the diphtheria bacilli persisted. Each bacteriologic examination gave the same positive results.

Mr. P., age 35, occupation grocer, consulted me six years ago, suffering from constitutional and nasal syphilis. The lower and middle right turbinate bones had been exfoliated. The left nostril was normal. The patient's health at that time was very poor, having lost forty pounds in weight. Appropriate treatment, however, soon restored him to his normal weight; his general health improved and he discontinued his visits, except at long intervals. Last September he returned, complaining of poor health with pain in the region of the frontal and ethmoidal sinuses and reported a loss of fifteen pounds in weight. Examination showed the right nasal chamber filled with crusts and muco-purulent secretion. The lower and middle turbinate bones, as before stated, had been exfoliated. The chamber was very large and some uncovered bone could be detected in the region of ethmoidal cells. Cultures were taken from the nasal chambers, and the bacteriologic report was "a typical culture of diphtheria bacilli." Inquiry revealed no source of the diphtheritic infection. The patient was placed on active syphilitic treatment and again rapidly regained health. Cultures were made from time to time from the nasal mucus and diphtheria bacilli repeatedly found.

Many of the other patients with diphtheria bacilli in their nasal secretions, gave somewhat similar histories to those just cited.

REMARKS.

It is not the intention of the author to discuss in this paper the specific virulency or non-virulency of the diphtheria bacilli found in such a large number of these cases. Some experiments with cultures from several of the patients are about to be made upon animals and may throw some light upon this point. Many interesting points, however, occur to one's mind upon contemplating the results already obtained by this investigation, and some of these may be said to be positively demonstrated. Thus, it would seem proven that in a large percentage of chronic nasal catarrh the secretions are infected with diphtheria bacilli, staphylococci and other bacteria.

The importance of this fact in surgical procedures upon the nose, throat and adjacent parts, particularly the eye, is evident. Certainly the surgeon should precede such operations by a clinical and bacteriologic examination of the nasal chambers, and when necessary institute treatment to remove the nasal infection. Such treatment should include very strict disinfection of the nasal chambers, and the author would state that in most cases he had no difficulty in quickly effecting this purpose, although for a permanent removal of the germs, treatment must be continued for some time, for in a number of cases after stopping the local treatment, the diphtheria bacilli were found to return and were recognized in the cultures.

Again, the diphtheria bacilli were chiefly found in cases of atrophic rhinitis, chronic purulent rhinitis and nasal syphilis. In other words, where a pathologic condition of the nasal chambers with altered and morbid mucous secretions continues for a considerable length of time, thus offering a suitable soil for infection, not only by the diphtheria bacilli but

by many other germs, as was ascertained by the bacteriologic investigation. Now, it is well known to us that in such cases we frequently find several members of the same family afflicted with the same disease, and although certain inherited and acquired constitutional dyscrasias frequently underly such conditions, yet we are impressed with the great importance not only of disinfection but also of avoidance of infection to others.

From this point of view, the common use of a handkerchief among the children of a family, such infected children sleeping with healthy ones, or the indiscriminate kissing of children, may be mentioned only to be unreservedly condemned. Again, in all the cases where the diphtheria bacilli were present, the patients were observed to be in ill health, being listless, pale and anemic. It was also observed, that after treatment was instituted, not only the local condition but also the general health greatly improved. It may therefore be possible that in such cases there is a slight chronic toxemia caused by the nasal condition.

Again, it is quite probable that in such diphtheria, infected nasal secretions may account for the present wide spread of diphtheria, indeed, several instructive instances have come under my notice; it is to be hoped, therefore, that the proposed investigation upon animals to determine the virulence of the bacilli will aid us in forming some positive decision.

In conclusion, it gives me great pleasure to acknowledge my indebtedness to Dr. W. J. Gillespie, whose careful and painstaking laboratory work alone enabled me to collect the material for this report.

1929 Chestnut Street.

ACUTE OTITIS MEDIA.

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After a very careful and interested study of the paper upon the above affection by Dr. Norval H. Pierce, and the discussion by some of his colleagues, members of the Chicago Academy of Medicine in the *JOURNAL* of Dec. 19, 1896, I have felt impelled to report a case, in which the treatment followed was very dissimilar to that advocated by the essayist and his confrères.

The case I shall herein report occurred in my own person, and is but a description of many others occurring in the practice of my very able and accomplished medical attendant, as well as in that of his students, and I am proud to number myself among the latter.

I fully endorse what was said by Dr. Wm. L. Balingier in the discussion of the paper, viz.: "Dr. Pierce is to be congratulated upon the pathologic and bacteriologic portions of his thesis;" and I take pleasure in adding, that his clear exposition of the etiology of this most distressing affection, also calls for hearty praise and commendation.

It is only along the lines of treatment that I must and do take issue; and in order that my position may be made plain, and as well for the sake of brevity, I will detail as concisely as possible the history of my case, calling attention in passing to certain modifications in treatment, as compared with that advocated by Dr. Pierce.

On Wednesday, Feb. 5, 1896, I used in a Birmingham douche, a 50 per cent. solution of glyco-thymolin