A corollary is that refraction is not taught, there is not a single adequate and thorough-going school wherein may be taught, or wherein there is any outfitting, or attempt to teach, this most skilled, most infinitely subtle and difficult art and science. Two years at least of study, daily, exclusive study and practice, after the general course in medicine, under expert teachers, and on the part of the best type of student minds, is a too short period to introduce a man to the work, and to legally justify him in entering on such specialist practice. An endower and maker of such a school would do the world a greater service than either Carnegie or Rockefeller have so far dreamed of doing.

(To be continued.)

DIFFERENTIAL DIAGNOSIS BETWEEN PSEUDOMEMBRANOUS ANGINA OF SYPHILIS AND DIPHTHERITIC ANGINA.

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A positive or correct diagnosis of these two conditions should be made at the earliest possible moment, lest a serious, not to say a fatal, mistake be made, and every means to surmount the difficulties which lie in our way should be conscientiously employed and thoroughly exhausted. That the clinical picture may lead us to error is sufficiently proven when we see such authorities as the elder Fournier, the world's most prominent syphilographer, an acknowledged authority of pre-eminence, err in his diagnosis by relying too implicitly on, as he supposed, a well-established clinical picture.

Bacteriology has made possible the study and classification of the pseudomembranous anginæ; has demonstrated their different varieties, and placed at our command an almost, if not quite, certain means of establishing a diagnosis. The physician meets with many conditions which present an almost identical picture, both macroscopically and microscopically, but which are due to vastly different causes. Most of the infectious diseases of the buccopharyngeal cavity may manifest themselves by pseudomembranes. Buccopharyngeal syphilis and diphtheria, particularly, may cause the formation of false membranes, the appearance of which are identical. The lack of knowledge on this point, and the failure to consider the same, is responsible for the errors of diagnosis recorded in our medical literature. In our textbooks very little stress is laid on the importance of a correct differential diagnosis between these two conditions, and on what may be the result of our error in not exhausting every possible means to clarify our diagnosis. On the one hand, we may expose many to the known contagion of diphtheria, and, on the other, we lay the attendants and perhaps other patients open to the possible infection of syphilis.

Due perhaps to secondary infection, the syphilitic localization on the buccopharyngeal cavity is not always apyretic. A chancre of the tonsil may assume a pseudomembranous appearance and be accompanied by well-pronounced general phenomena. In some cases its onset is presumably sudden, but, as a rule, it is slow in making its presence felt. It is frequently accompanied, however, by a rise of temperature to 100 F. or 102 F.; rapid pulse, anorexia, dysphagia, foul breath, anemia and marked depression or fatigue. And just here it might be well to remark that too much importance must not be placed on unilaterality (or the lesion involving but one side), for the reason that in the secondary period or stage of syphilis, when pseudomembranes form, they often involve or cover both tonsils, the pharynx and uvula. When such a pseudomembrane is removed, a bleeding and ulcerating mucosa is disclosed. In these cases we always have glandular enlargement present.

Our diagnosis should always be based on the results obtained from culture tests, and some little consideration be accorded the personal history, as we do have cases in which we have both the diphtheritic and syphilitic infection manifest at the same time in one individual. When this double infection does occur, our first duty is to destroy the Loeffler bacillus infection, and subsequently direct our attention to the syphilitic. A third element which may enter into the differential diagnosis is the angina produced by Vincent's fusiform bacillus, which also at the beginning presents symptoms similar to those of diphtheria.

This infection, however, can be readily recognized by the aid of the microscope. Just here, before citing some cases in point, allow me to insist on the use of the microscope, and the necessity of making cultures in all cases of pseudomembranous affections of the mouth and throat.

Fournier's case—that of diphtheria mistaken for syphilis:

CASE 1.—Child (whose father was known to be syphilitic), was admitted to the Hospital Saint Louis, suffering with a membranous affection of the throat, and presenting an undoubted syphilitic eruption on the body. The patient grew rapidly worse, and twenty-four hours after the diagnosis of syphilis had been made diphtheria was suspected and positively diagnosed. The patient died promptly of diphtheria. This, however, was before the introduction of antitoxin, the use of which, had it been known, might possibly have brought about a different termination.

Petges[1] reports the following cases:

CASE 2.—Diphtheria mistaken for syphilis.

History.—Male patient, a hussar in the Tenth Regiment, Bordeaux, presented himself for medical examination. An indurated chancre which had been present between two and three weeks was found in the balanopreputial folds. This appeared sixteen days after an intercourse.

Examination.—Secondary manifestations promptly appeared, and on Jan. 6, 1901, mucous patches appeared on the tonsils. Notwithstanding energetic anti-syphilitic treatment the patient became anemic and rapidly emaciated, the pharyngeal lesions increased and membranes formed. Diphtheria having appeared in a few members of the regiment, the possibility of this being a case was considered. January 16 dysphagia was noted to have increased, and the temperature had gone up to 100.5 degrees F. January 18 the patient's general condition had grown more alarming, and on January 19 he was placed in the diphtheria ward and a culture made, which showed a pure growth of the Loeffler bacillus.

Treatment.—Injections of antitoxin, 30 c.c. in all, resulted in the patient's recovery, after which anti-syphilitic treatment was energetically employed, with gratifying results.

In this case, as you will note, we have the two conditions or infections existing at one and the same time.

Rouflay[2] reports another case of diphtheria likewise mistaken for syphilis:

CASE 3.—Patient, male, artilleryman, aged 22 years. March 4, 1896, was admitted to the Hospital Fontainebleau.

Examination.—Examination revealed a marked secondary syphilitic eruption, with pseudomembranous patches on the

1. Arch. de Med. et Pharmacie, 1902, vol. xxxix, p. 313.
2. Arch. de Med. et Pharmacie, 1896, p. 175.

fauces and pharynx, which also involved the larynx, producing difficulty of breathing. Rouflay suspected and suggested diphtheria as the probable diagnosis, but was overruled by consultants, and no culture was made.

Treatment and Results.—On the day following, however, the patient's condition became alarming and tracheotomy had to be performed.

The patient promptly died, and on postmortem examination the false membrane was found to have extended down into the bronchi, and cultures made from the larynx demonstrated the pure Loeffler bacillus.

Petges[3] reports the following case, in which a chancre of the tonsil, with syphilitic angina, was mistaken for diphtheria:

CASE 4.—Patient, male, was admitted to the Hospital St. Nicholas July 17, 1900. Denied all history of syphilis.

Examination.—Culture made the following day was negative in results as to Loeffler's bacillus, but showed abundant streptococci and staphylococci. The tonsils, uvula and the pillars of the fauces were covered with false membranes.

Treatment.—The treatment, consisting of antiseptic gargles, had no effect on the condition. July 30 marked atypical adenopathy was noted at the angle of the jaw on the left side. On account of the size of the ulceration, the atypical adenopathy, and the general condition of the patient, the physician was thrown off his guard as to syphilis, and thought the case one of tuberculosis of the tonsil. A general tonic course of treatment was instituted, and followed for about six weeks, without appreciable results. Finally, when the secondary eruption appeared, the correct diagnosis was made, and anti-syphilitic treatment was instituted, with gratifying results.

In December, 1903, I saw, in consultation with the family physician, a patient whom I had under treatment for syphilis.

CASE 5.—Male, 27 years of age; bookkeeper by occupation.

Examination.—When seen by me in December, 1903, he presented a pseudomembranous affection involving both tonsils, the pillars of the fauces and the uvula. Temperature, 101 degrees F.; rapid pulse and marked mental depression.

Treatment and Result.—The family physician diagnosed diphtheria, without making a culture, and injected antitoxin. No improvement having followed after ten days had elapsed, I was asked to see the patient, and made a diagnosis of syphilis, which the negative results of a culture made at this time and the results obtained from anti-syphilitic treatment proved to be correct. (Syphilis, four months.)

Guillemants[4] reports the following interesting case:

CASE 6.—Female patient was treated with anti-streptococcic serum for what had been diagnosed as chronic tonsillitis. After five or six weeks she was admitted to the hospital.

Examination.—Examination showed yellowish membranous patches on both tonsils, with well marked adenopathy.

Treatment.—Diphtheria was at once suspected and an injection of antitoxin given. A culture taken at this time revealed streptococci and staphylococci. No improvement followed the injection after a week's time and a second culture was made, and this time Loeffler's bacillus was found.

During this time the patient gave birth to a child, with unmistakable signs of congenital syphilis. The child lived but a few hours. The mother then acknowledged having had syphilis, and under anti-syphilitic treatment the membranes promptly disappeared and her recovery was rapid.

Numerous other cases in point might be cited, but my object in presenting this paper was not to enter into a résumé of the literature, or to advance any new theories, but simply to direct attention to the difficulties of differentiating these conditions, and the serious consequences which may follow as a result of an error in diagnosis.

3. Arch. de Med. et Pharmacie, 1902, vol. xxxix, p. 313.
4. Thesis, Paris, 1897, No. 257.

CONCLUSIONS.

In conclusion, I wish to emphasize the following points:

1. Pseudomembranous syphilitic anginæ are not rare.
2. The differential diagnosis of pseudomembranous syphilitic anginæ and diphtheria can not always be made from the clinical picture.
3. Culture tests and the microscope should be employed in all suspected cases.
4. In all cases in which we are highly suspicious of diphtheria, antitoxin should be used promptly while awaiting the maturity of our culture tests.

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Clinical Reports.

COMPLETE INVERSION OF THE UTERUS WITH SUBSEQUENT REDUCTION AND RECOVERY.

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Patient.—Mrs. W. F. M., age 29 years, a farmer's wife, who had been delivered of a female child Feb. 10, 1902, was admitted to the Southwestern Hospital, Elk City, Okla., March 12, 1902.

History.—Patient's own statement: "I have always been stout and well, have given birth to three children, one aged 4, one aged two years, and the one just recently born. When my labor came on I sent for a midwife, Mrs. Hughes, my neighbor who lives near by, and when my child was born I was so nearly dead we sent for a physician, who came and said I had a large tumor, gave me some medicine and left the house."

The social and family history of this patient gives no information other than that she was without constitutional taint and had always followed a plain and simple mode of living.

Examination.—An examination, made at the hospital by Dr. T. E. Standifer and myself, March 12, 1902, thirty days after confinement, revealed a completely inverted uterus, filling up the vagina, from which exuded a bloody discharge of offensive odor. Patient complained of throbbing pains and there were marked distention and tenderness over the lower half of the abdomen with characteristic facies. Edema of the lower limbs; lymphadenitis, with inability to void the urine, accentuated the serious character of the illness. Temperature on date of admission 103, pulse 130, respirations 30.

Treatment.—From date of admission until discharged the treatment consisted mainly of supporting measures, such as highly nutritious food, baths and douches of hot creolin solution in the vagina. No attempt was made to reduce the temperature.

March 15, three days after entering the hospital, the gravity of the patient's condition, coupled with the unusual character of her illness, prompted Dr. Standifer to invite a number of his colleagues to examine the patient and to decide, if possible, the best course of treatment to pursue. Included in this number was Dr. J. C. Baker, Port, Okla., who saw the patient at her home February 12, two days after confinement, and who, recognizing her true condition, administered an anesthetic and attempted reduction of the inverted uterus, after Emmett's method, without success. At this consultation it was decided that, when the patient's condition would permit, another attempt to replace the inverted uterus should be made, and failing to effect a reduction, a vaginal hysterectomy should be proceeded with at once, while the patient was still anesthetized.

During the intervening period, from March 15 to March 25, when reduction was effected, the patient's condition remained practically the same, except as to the improved character of the vaginal discharges and the physical evidences of improve-