way of results. As Dr. White jokingly says, he preached in every church in New Orleans, and it is true: he preached a gospel that saved the lives of the people more effectively, perhaps, than the preachers who ordinarily occupied those pulpits save the souls of their people and I consider that this victory—the moral and intellectual victory—transcended in magnitude the wonderful success achieved in banishing the disease proper before the coming of frost.

DR. R. A. NEALE, Chicago: About thirty years ago I was physician to the poor of Washington, D. C.; I had assigned to my territory a section of the city that was nearly surrounded by water, and it was called "Foggy Bottom;" the three thousand odd people living there for ten or twelve years had been suffering intensely from ague; the little huts that they built were nearly all covered with shrubbery and vines. Foggy Bottom was a piece of land that was marshy; in a number of years it became filled in and houses were built there. My predecessor showed me an average every summer of over 600 cases of typical malaria in that Foggy Bottom. I did not know anything about Italy's great progress in preventing malaria, but I was fearfully annoyed every night by the numerous mosquitoes flying about my head, and I decided that I must get rid of them. I made all of those people get rid of all vines and shrubbery, cut down every tree, and put screens in all the windows and burn sulphur in their rooms. I had them make hundreds of bonfires at night, hundreds of them; because the breezes would come at night and blow the mosquitoes away down the river; in the morning it would come the other way and blow them back again. The next year of my term, instead of having 600 cases of malaria I had only 50; the third year there were only 25, and nearly all of the patients had recently come to reside in Foggy Bottom.

DR. SEALE HARRIS, Mobile, Ala.: I expected my statistics to be questioned, but those obtained from the United States Census Reports are the only ones available. I am willing to admit that many deaths reported as malaria are due to typhoid fever, tuberculosis, sepsis, hookworm and other diseases, but it is a remarkable fact that along the Mississippi Valley, along the valleys adjacent to the Missouri and Ohio rivers, and in the South, where conditions are favorable to the development of anopheles mosquitoes, there are so many "ignorant" physicians who report these cases of malaria. The United States Army surgeons, I believe, represent as good a class of physicians as we have, and the statistics from the United States Army posts, which are located in all sections of Texas, show that one person out of every seven residing in those posts had malaria in 1901. Not only that, other statistics compiled by Dr. Waldren show that in the railroad hospitals in Texas, which are located in cities in different parts of the state, where it is certainly probable that there are competent physicians in charge, one patient out of every four has malaria. I admit that my statistics may not be correct, but from my own observations in the South I believe that there a large proportion of the population has malaria at some time during the year. The death rate from malaria is low, and is growing less, and it is a very mild disease, yet it does affect the vitality of the individual; it makes him more susceptible to other diseases, and I believe it materially affects the general mortality rate. I am sure that malaria is growing less prevalent in the cities where there is proper sewerage. I believe that will account for much of the decrease of malaria in Maryland. In Havana and the Canal Zone where the sanitation was worked out largely against mosquitoes the general mortality rate was reduced about 50 per cent., and as Dr. White has pointed out, the general death rate has been reduced in New Orleans since the crusade against mosquitoes.

Regarding the amount of typhomalaria in the South, I do not know of any cases in which typhoid and malaria have been found at the same time in the same individual, but it is certainly true that in the convalescence of typhoid fever malaria does occur. In the tropics during the Spanish-American War, when a large number of United States soldiers had yellow fever, they suffered a great deal more from the malaria that followed. I realize the difficulties of educating the public, but the lessened prevalence of malaria in the South is due

to the fact that the educated, "well-to-do" people have their homes screened with the idea of preventing malaria by keeping out mosquitoes, and with such people malaria is less prevalent than formerly. Another reason why malaria is less prevalent in the South is the widespread use of quinin. Dr. H. F. Harris, of Atlanta, studied a large number of cases of continued fever and the greater majority of them responded to the Widal test for typhoid.

I desire to thank Dr. White for calling attention to my mistake as to Laveran being an Italian, but the italians have done a great deal in studying malaria, and the literature published by the Italian Society for the Study of Malaria is greater in volume than that contributed by any other country.

My object in bringing this paper before this Section is this: While malaria is not perhaps so severe an infection as yellow fever, typhoid fever, tuberculosis and many other diseases, it is one of the more prevalent diseases in the United States. There is a great opportunity for sanitarians in the South to make records by decreasing the death rate from malaria, and in doing that it would be one of the greatest things for our country, particularly for the South, because we have the reputation of being unhealthful. Eliminate malaria and you will certainly decrease the general death rate.

SOME MINOR GYNECOLOGIC MATTERS OFTEN OVERLOOKED *

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In routine practice we may fail to appreciate certain rare or obscure diseases which are very annoying to our patients, although not dangerous to life. We find a number of cervical erosions, classified as infectious, which are due to other causes. There are numerous infections of glands of the genital tract which are not understood, and which are not successfully treated because the seat of the infection is not exposed and thoroughly sterilized. Many patients have numerous deep vulvar glands, especially about the vestibule, which may become veritable nests for gonococci or other microbes and will perpetuate an infectious discharge indefinitely unless opened widely and sterilized by iodine or some equally good application. Skene's glands in the urethra are known to harbor infectious organisms and to cause a persistent urethritis. This disease requires surgical treatment if a cure is obtained. The glands must be opened up, thoroughly exposed and treated. My purpose at present is to direct attention to certain nerve changes about the genital tract.

NEURITIS AND HYPERESTHESIA OF THE VULVA AND VAGINA

This is a frequent and often unsuspected cause of annoying symptoms. One of the commonest mistakes made by physicians who treat gynecologic patients is to call every sensitive surface an inflammation. Careful discrimination will enable one to detect certain nerve alterations and to see the difference between them and vaginitis or vulvitis, due to infection or persistent irritation of any kind.

These nerve changes are often seen in a consulting practice. The patient has had fairly good, and perhaps rather active, treatment for infectious disease and has not obtained relief. In fact, nearly every patient coming under observation has been subjected to much local treatment, all of which has probably done harm unless such treatment finally results in a diagnosis.

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

SYMPTOMS

The patient is usually a neurasthenic or a neurotic. She is usually suffering from associated disease, which is often due to impaired function rather than to organic mischief. She has a leucorrhea due to more or less endocervicitis, and believes that the discharge causes the painful condition of the vagina. The parts are extremely tender, are often red, and occasionally swollen. Micturition is generally painful in those cases with red and swollen mucosa. The disease is not confined to any special class. We encounter it in virgins relatively as often as in married women. The patient is often told by some physician that she has "ulceration" of some portion of the vaginal mucosa. A slight erosion of the cervix becomes the *point de résistance* of much medical treatment, and in a recent case the patient told me that she had "three different ulcers of the cervix cured by treatment, only to have them return as before."

It is a common practice of many physicians to rely strictly on local treatment for a cure of this disease, because they fail to see the real cause back of the local manifestation. Obviously, all applications of tampons, iodine, ichthyol, boric acid, and glycerin fail unless they benefit by entertaining the patient while time and improved general health bring about a cure. It is in this class that we see the evil result of suggestion. Many of these patients are acutely sensitive to wrong impressions and they are easily and often inadvertently led to think that a slight displacement of the uterus or an enlarged ovary, or possibly some slight intestinal irritation, if treated perhaps surgically, can be cured. It is well known that the uterus has often been removed because the supposed irritating discharge could not be otherwise cured. Of course, in certain cases the neuritis may not easily be relieved or the symptoms even palliated. I have seen several cases associated with urethral caruncle, and I am inclined to believe the pain of a caruncle is always due to an associated neuritis. We have all seen caruncles removed without relief to the patient, and unless they are associated with cystitis the failure is generally due to nerve changes.

DIAGNOSIS

If methods of examination were more exact we would find fewer cases of acute infectious disease of the vulva and vagina and relatively numerous cases of neuritis or hyperesthesia. Naturally, we resort to well-known methods of treatment rather than make the effort to establish a correct diagnosis based on careful investigation. Such empirical practice will perhaps long retain a hold on our favorable consideration, although we always have at hand perfectly satisfactory, even if slower, methods of reaching a diagnosis and consequently a proper indication of treatment. We fail to see any improvement in the teaching or treatment of the minor gynecologic cases since the days of Sims, Emmet and Thomas, and hence surgery has become far more prominent in this specialty than before, and I am confident more than is desirable or necessary.

It is impossible for every one at first to distinguish between cases of hyperesthesia and those of neuritis, but it is comparatively easy for those accustomed to make such distinctions in other portions of the body. Without resort to electrical or other scientific measures, the usual observation and care which is exercised by any physician who is on the alert for these cases will enable him to detect the condition under discussion. In any event, a diagnosis between hyperesthesia and neuritis is not absolutely necessary. The precise portion of the vulva or

vagina which may be the seat of the disease is altogether uncertain. I find that the sensitive area in by far the greater number of cases is about the vestibule and introitus. Recently a case of neuritis was seen with dark discoloration of labia around the glands of Bartholin, due to repeated cauterizations, probably with silver nitrate. Occasionally I find a sensitive spot or area on or near the cervix, as in a case recently seen in a pregnant woman. This latter was, however, associated with marked neurotic symptoms which closely resembled inflammatory mischief.

ILLUSTRATIVE CASES

CASE 1.—Patient referred by Dr. C.

Miss X., aged 35, had been treated for infectious endometritis by curettage and intrauterine cauterization, without relief. She had swelling and edema of the vulva with each menstruation, causing great distress. When first seen there was redness; slight swelling and some erosion of the vulva with painful micturition and occasional itching. The urine was nearly normal and contained no sugar. She had been examined for eczema by a competent dermatologist who recognized the unusual features of the case. This patient had associated neuritis and endometritis. I made the diagnosis and treatment was carried on by her family physician, who reports a gradual improvement and nearly perfect restoration to health.

CASE 2.—Patient referred by Dr. W.

Miss Z., a thin, nervous virgin, aged 27, with hymen intact, had been told that she had "ulcers" on the vulva. She had a very slight leucorrhea, but I failed to discover the ulcers or even redness about the vulva or vagina. The uterus was small and retroverted, otherwise all the organs were normal. Her complaint of painful and sensitive vulva and vagina led me to go slowly in reaching a diagnosis. Examination of the discharge was negative, there being no possible infection of the vagina. She passed out of my hands and an abdominal operation was performed for a slight displacement of the small uterus, with the result that she believes herself benefited, although the time has been too short for definite results. Of course, the lesions found at the operation did not explain the symptoms and the girl will finally recover when her nervous disease disappears either by good fortune or by proper treatment.

TREATMENT

The suggestions already made indicate the line of treatment to be adopted. The diagnosis made, the treatment becomes a matter of simple attention to the general health of the patient. In irritable and sensitive vaginae we should avoid all irritating applications and should use either drying powders or emollients. It should be remembered that any fluid may cause burning and smarting if a neuritis be present. The indication is to protect the tender surfaces so far as lies in our power.

Stoneleigh Court.

ABSTRACT OF DISCUSSION

DR. ROBERT MORRIS, New York City: The colon bacillus is not infrequently an infecting agent in the vagina and uterus. At present I am having some investigations made in a number of cases in which the discharge from the endometrium is secretory in character. This discharge forms a culture medium for the colon bacillus, and the colon bacillus may extend its field from the vagina to even the peritoneum. Another point which I wish to make is in connection with a minor gynecological disturbance that is commonly overlooked, and to which I have given a good deal of attention during the past two or three years—the effect, the remote effect, of eye-strain, particularly in school girls. Recently I had two cases; one patient had an acute anteversion; one had retrodisplacement. In both cases there was obstinate obstruction of

the bowel to such a degree that both patients were in great distress, and there was a question whether or not they would be obliged to give up their school work. In both cases I was able to eliminate all factors except the eyestrain. The patients were sent to an ophthalmologist and both were well in thirty days. I am having a great deal to say on the subject of eyestrain, but not so much as the men who are throwing the subject into disrepute. A great many ophthalmologists have seen the horizon of this subject enlarged so enormously that they are speaking from imagination rather than facts. Let us speak from facts. In a certain proportion of minor gynecologic cases, particularly in young people, eyestrain is the cause and can be discovered by the proper ophthalmologist—who is not easily found. The ophthalmologist usually makes an examination with reference to an ordinary refraction and his report relates to the sight. That has nothing to do with the case. Remote disturbances are to be sought by men competent to do this. I said to an ophthalmologist recently, who had examined the eyes of a patient in which eyestrain was, in my opinion, the cause of the disturbance: "Now, have you examined with reference to muscle imbalance?" "No," he said, "I have just examined with reference to sight; I will take this matter up." There was a case that had slipped past an absolutely competent man who had not taken up this subject with reference to gynecologic features. It is a matter which has been overlooked by most of us, but let us send cases in which eyestrain is possibly the cause to the proper ophthalmologists, and let him give us either negative or positive testimony.

DR. MARY E. DUNNING, Newburg, N. Y.: I believe that nerve strain has much to do with many local conditions seen in our patients. A case worthy of note is that of a woman of 38, whose menstrual function had always been accompanied with terrific headaches and vomiting. Examination showed nothing abnormal in the pelvis excepting extreme tenderness of the adnexa, and there was a spur which blocked completely the left nares. Two pelvic hydroelectric treatments were given and the spur removed. She has had no nerve disturbances, menstruation has been normal and she has been perfectly well since.

DR. ANGELINE MARTINE, Utica, N. Y.: Dr. Morris' mention of the colon bacillus being a cause of irritation in certain cases, reminds me of a case in a young unmarried woman of undoubted good reputation who had an irritation resembling grossly a gonorrheal infection. I had the discharge carefully examined under the microscope, and found that it was due to an infection by the *Proteus vulgaris*. I have had a series of seven or eight such cases which I have reported. The infection is very intense. One of the cases seems to have been contracted by the use of the public toilet. The source of the other cases could not be traced. The infection so closely resembles gonorrhea that much care should be observed in the examination.

Advantages and Disadvantages of Pasteurization.—One of the chief objections to pasteurization is that it promotes carelessness and discourages the efforts to produce clean milk. It is believed that the general adoption of pasteurization will set back improvements at the source of supply and encourage dirty habits. It will cause the farmers and those who handle the milk to believe that it is unnecessary to be quite so particular, as the dirt that gets into the milk is going to be cooked and made harmless. It is not proposed that pasteurization shall take the place of inspection and improvements in dairy methods. To insure the public a pure and safe milk supply should be regarded as one of the most important duties of the health officer. Whether pasteurization is adopted by a city for its general milk supply or not, no milk should be accepted that does not comply with certain reasonable chemical and bacteriological standards. This would aid the inspectors in enforcing good dairy methods. Pasteurization then must not be used as an excuse to bolster up milk unfit for home consumption. To insure this end, the health officer should have authority to condemn and destroy bad milk, whether or not pasteurization is practised.—M. J. Rosenau, in *Annals of Medical Practice*.

THE SANITARY REGENERATION OF SAN FRANCISCO

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Early in the morning of April 18, 1906, San Francisco was awakened by a severe shock of earthquake which, breaking the electric wires, set fires in many parts of the city. The same shock which set the fires destroyed the means of defense by breaking the water-mains, and the city was unprotected against the fury of the flames which raged uncontrolled for three days and nights. Few, if any, of the great fires of the world have equaled it in extent of property damage. Picture a city, rich, substantial, with a beauty and grandeur peculiar to itself, covering hills and valleys, with vast mercantile and manufacturing industries, changed in three days to a pile of broken brick and twisted girders, 2,560 acres of ruins, 28,188 houses destroyed, 275,000 people homeless, \$350,000,000 property values wiped out of existence!

It was a time that tried men's souls; and never was American pluck put more fully to the test and never its superior quality more fully proved. There was hardly a person in the city who was not stricken to a greater or less degree; and thousands on thousands had not only the savings of a lifetime wiped out, but all immediate chance to work for a living destroyed. There was hardly food enough left in the city for a full meal for the inhabitants, most of whom were sleeping in the parks and vacant lots. The supply of water was very limited, and no fires were allowed in houses, so all cooking had to be done in the open air. The sewers were broken and clogged, the means of collecting garbage destroyed, and conditions were favorable for the spread of zymotic disease.

The conditions confronting the health authorities were serious but were fully appreciated, and long before the fire was out a complete organization was installed, composed of the medical service of the United States Army, the State Board of Health, and the City Health Department. The city was divided into districts, and over each was placed a local physician who was skilled as a leader as well as in his chosen work. He selected his own assistants from among the medical men of the city. Here let me give a word of tribute to the doctors of San Francisco. No class or profession was hurt so badly. Libraries, instruments, accounts and practice were all swept away and many of those fortunate enough to own their homes lost them also. Without price or any consideration they gave their time and skill not only to aid the sick and injured, but to save the city from a fate which seemed almost inevitable. The work they did was not spectacular, but its value to the city was none the less great and can never be properly appreciated. They went from house to house and camp to camp, inspecting, regulating, instructing, and, where it was necessary, backed by the strong arm of popular consent, enforcing sanitary measures. Connections with broken sewers were closed, water was boiled, body discharge buried, waste brought to sidewalks, and pollution of the surface of the ground forbidden. As a result of these measures there was practically no sickness in the city during the few weeks immediately succeeding the fire.

The people were largely living in the open air, eating simple, plain and wholesome food, and the waste matter was reasonably well destroyed. Business activities were at a standstill and personal attention was given to sani-