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ART. I.—*Observations on Spotted Fever.* By WM. O. BALDWIN, M. D., of Montgomery, Ala. Read before the Medical and Surgical Society of Montgomery, April 2d, 1866. (Published by order of the Society.)

I HAVE recently met with a few cases of disease of a very malignant and fatal character, which I am persuaded has never prevailed in this section until within the past few weeks. Indeed, judging from the scanty records which we are enabled to find on the subject by medical historians, I am much inclined to the belief that the disease has not prevailed very often in any country. Most of our systematic works on the practice of medicine make no allusion to it, whilst others treat of it in a very unsatisfactory manner—generally confounding it with other and very different diseases. The following notes of three cases of disease occurring in this place, and proving fatal, will, probably, give a better idea of its nature than I could do by simply reading you a synopsis of them.

CASE I. *March 4.* Was sent for in the morning by Mr. D—, to see his little daughter, "Mary Lou," aged about eight years. When I entered the room the family informed me that they had sent for me to see a case of smallpox, and presented this little girl, who was sitting in a chair before the fire looking very cheerful and well. On examination I discovered the neck and upper portions of the breast to be thickly covered with dark red or purple spots, varying in size from a duck-shot to a common sized pea. This eruption was not elevated above the skin, and did not recede under pressure. I did not examine the skin under the clothes. I thought the eruption was a singular one under the circumstances, but as the child appeared well otherwise and did not complain, I made no farther examination than to feel her pulse and examine her tongue, which appearing natural, I simply remarked to the parents that they need have no fears about small-

pox, and made no prescription for her. I was preparing to leave the house, when I was told by the family that they wished me to see an old negro woman in the kitchen, who had been complaining for several days. This I found to be a case with the primary fever of smallpox. On the following morning the eruption made its appearance and she was removed to the hospital.

5th, 6 o'clock P. M. Was sent for to see little "Mary Lou," who had just had a chill. Had been much troubled and grieved at the removal of the old woman from the house this morning. She had been her nurse, and she was much attached to her, and the family attribute her present illness to nervousness arising from the distress of mind under which she has been labouring through the day. Pulse, 150 and very soft; surface rather cool; tongue coated white; bowels constipated; tonsils slightly enlarged, of a pale yellow colour and covered with opthous ulcerations. Seems to be very uncomfortable generally. From the violence of the chill, the appearance of the throat and general distress, I apprehended a severe attack of scarlet fever. Ordered a dose of castor oil, a mixture of hydrochloric acid and chlorate of potassæ; and a gargle of sage, alum and honey to-night; also a solution of nitrate of silver, with which I expected to cauterize the throat early next morning.

12 o'clock, night. Sent for. Pulse 170 and soft, skin moderately hot, nausea and occasional vomiting, extremely restless, tossing about in bed and apparently in much pain. She does not appear to be delirious, but gives no satisfactory answers to questions. No motion from bowels. Ordered enema, mustard plasters, and diaphoretic mixture.

6th, 8 o'clock A. M. Passed a very restless night, tossing about in bed; breathing short and hurried; pulse very feeble and intermittent; sordes on teeth; still seems intelligent, but gives no satisfactory answers to questions; countenance anxious; face pale and sunken; skin moist and cooler; surface generally cadaverous; bowels moved twice during the night. A few hours after this there was a feeble effort at reaction, and pulse became somewhat stronger, which, however, lasted but a short time, when it failed again, and the surface became of a dusky, purplish hue, deeper at the extremities, and she gradually sank from this time and died at two o'clock P. M.—just twenty hours from the chill. Dr. Dillard saw this case with me and said he thought he had recently seen some cases like it, which were attended with a like result, and which he considered cases of suppressed smallpox. Stimulants were used during the latter stages, but without effect.

CASE II. March 13, 6 o'clock P. M. Was called to see Miss F. T—, a young lady, aunt to the little girl "Mary Lou"—living in the same house, and who was her constant nurse during her last illness. Found her in a heavy chill, with severe rigors or shivering fits. She was sitting in a chair before the fire. Countenance very pale. Has sore throat, which she has complained of for several days. Has had something of a diarrhoea for some days previous to yesterday; bowels now constipated; tongue covered with a dirty white fur, moist. Pulse much accelerated and feeble. Complains of pains in her extremities and a general uneasy and distressed feeling; the rigors and shivering fits are exceedingly severe. I had been prescribing for her, for dyspepsia occasionally, for a few months past, and being informed that in addition to her usual meal for dinner, which she took about two o'clock, she had also eaten rather freely of a potato pudding sent in a few hours after by one of the neighbours, I was inclined to

think these rigors were the nervous chills which we sometimes meet with in dyspeptics, from indigestion, and that they would not be followed by any great amount of febrile reaction. Ordered warm water to be drunk freely until vomiting is produced; after which, directed her to take half a teaspoonful of bi-carb. soda in half a tumbler of water, with two teaspoonfuls of purgative. Hot applications and hot ginger tea. 9 o'clock P. M., was sent for in consequence of agonizing pains in arms, wrists and legs. She held her arms in such a position and complained of them in such a way as to lead me to suspect that she might have an acute neuralgic rheumatism, and I so expressed myself to the family. The slightest touch, even the laying of the hand gently upon the wrist to feel the pulse caused her to scream out with pain. Her agony seemed most intense. At times she complained of a general numbness—sometimes she would say she was paralyzed. Occasionally she would cry out from pain in this or that toe or finger. Sometimes she would complain of pain in the head, but the place to which she most commonly referred the severest pain was in the wrist of the left arm, though she would frequently say she was "in pain all over." Her screams from pain and cries for help were so constant and unremitting that it was somewhat difficult to question her, and caused both her attendants and myself to remonstrate with her. Breathing remarkably hurried and distressed; pulse 150 and fuller; skin hot; face flushed, eyes red and watery. Has vomited contents of stomach and used other remedies ordered. Was told that she seemed much exhilarated after reaction came on—making jocose and pleasant remarks to servants and other attendants. Chill lasted between two and three hours. Ordered, R.—Cinamel gr. vj, pulv. opii gr. $\frac{1}{2}$, M.—to be made into pill and taken at once, and pulv. Dov. camph. gr. viij; the Dovers powder to be repeated in two hours if pain and distress continue. Also a diaphoretic mixture of sp. nit. dulc. and chlorat. potass., with quinia, in the morning—six grs. at six o'clock, to be repeated every three hours until eighteen grs. have been taken.

14th, 7 o'clock A. M. Has spent a wretched night; slept but a few minutes at a time, and when awake screaming with pain in extremities and abdomen, those in abdomen resembling a severe attack of colic. Arms extremely tender and painful to the touch; wrists slightly swollen and somewhat stiff. Arms held mostly in one position, the slightest movement or touch causing increased pain. Complains of great numbness and paralysis in extremities, and a sense of general prostration; breathing much distressed, short, and very rapid. One of the attendants told me she was a little delirious through the night at times, but mind is clear now; eyes present a reddened, languid, heavy, and dull appearance. Has suffered much with nausea through the night, and vomited several times. Her general distress now seems to be extreme. Pulse 112, very feeble, soft, and intermittent; skin cooler, but still above the normal temperature. Took the six grains quinia at 6 o'clock, which was vomited and immediately repeated and retained. No motion from bowels. Ordered one teaspoonful of Henry's magnesia. 10 o'clock A. M., sent for. As soon as I entered her room the patient, looking at her hands and wrists, informed me she had smallpox. On examination I found the back of the hands, wrists, forearms, feet, and legs, covered with spots of a dark red colour, generally about the size of an English pea, some smaller, some larger; no elevation of skin and spots remaining under pressure. In form they are generally circular, though in a few instances, particularly those nearest the elbow, they are irregularly shaped, presenting an ecchymosed or bruised appear-

nee. Ordered warm heating applications and no other alteration in prescription. Quinia continued. 11 o'clock A. M. Invited my partner Dr. J. M. Williams to see her with me in consultation. Pulse 120, pains and general distress unabated, and no other material alteration. Ordered morphia gr. $\frac{1}{4}$ every second hour, and brandy as freely as it can be taken, hot applications; and also liquor ammon. acetatis. 3 o'clock P. M. Countenance anxious and expressive of deepest suffering. Pulse has been almost extinct at the wrist since last report, with cold and livid extremities. Now stronger and fuller with a heavy perspiration and warm surface. Says she feels the effect of the quinia in head—18 grs. of which have been taken. Hands though warmer have a mottled appearance. Skin over knuckles and other joints of upper extremities red and mottled. Nausea not so great. Pains, nausea, hurried breathing and general distress continue unabated. Continue morphia and brandy. 9 o'clock P. M. Pulse again very feeble, rejects brandy, ordered champagne instead; continue morphia and give lime-water; apply blister 6 by 8 to stomach. Dr. Williams will remain with her through the night.

15th, 7 o'clock A. M. Had passed a miserable night; was constantly screaming from pain with scarcely any intermission. Her sufferings, as described by Dr. Williams, were distressing to witness. He gave her chloroform with but little or very temporary relief. Pulse almost imperceptible; refuses almost everything offered by the mouth. Petechiae or purple spots of a darker color. Pupils very small, contracted almost to a point; no motion from bowels; nausea and vomiting, with troublesome eructations of gas. The arms have a hard elastic and stiffened feel; mental faculties tolerably clear. Ordered blister to spine three by twelve inches. Continue wine and stimulants. 9 o'clock. Invited my friend, Dr. J. S. Wetherly, to see her. Condition pretty much as at last report; gave her one-third grain of morphia with hypodermic syringe, and ordered aromat. sulph. acid. Continue stimulants as before. 11 o'clock A. M. Invited Dr. Dillard to see her with me. Pulse scarcely perceptible; countenance anxious, breathing short and rapid; extreme prostration; numbness and paralysis continue; sordes on teeth; mind clear. Hypodermic dose of morphia had no effect in controlling pain, which continues distressing notwithstanding the vital powers are failing so rapidly.

I now despaired of being able to do anything for her, and being much pressed with professional engagements, requested Dr. Dillard to remain with her, and did not see much more of her until she had had two convulsions, which occurred between three and four o'clock P. M. I saw her at four o'clock, found her without any pulse, with the surface generally, but more especially the extremities, of a dark purplish hue, and breathing rather stertorous but still hurried. I supposed her to be moribund, and left her without a prescription, though I was told by the attendants that she had another violent convulsion afterwards and did not die until six o'clock P. M. Dr. Williams saw her in the second convulsion, and described it as being one of the most violent he had ever witnessed. The family tell me that the first convulsion was even more violent than the one witnessed by Dr. Williams. Death occurred exactly forty-eight hours after the invasion of the disease. Through feelings of delicacy I did not request a post-mortem examination. Examined the eruption on her arms eighteen hours after death—spots very distinct, of rather a brighter purple than when noticed a few hours before death. Was informed by the ladies who dressed her for the grave that these spots were larger and much more numerous on

thighs, hips, back of neck, and around her waist. Considerable swelling of abdomen came on before death, and has much increased since.

CASE III. Reported to me by my friend Dr. A. M. Oliver, who was on the night of the 19th requested to visit Mrs. McD—, aged about twenty-four years. In consequence of the illness of his own wife he was unable to visit her, but prescribed morphia and brandy. Having his suspicions somewhat excited as to the nature of the disease by the history which was given to him of the case by the husband when he came to request him to visit her, and on next morning, learning that she had died at two o'clock on the previous night, he was induced to visit the house and learn more particularly the circumstances and history of the case. These he obtained from the husband and female attendant, which were substantially as follows:—

She had sore throat on day before attack (18th), with some bleeding from nose. About two o'clock P. M. on 19th she was attacked with very severe pain in left wrist, which was followed in about fifteen or twenty minutes by a chill attended with severe shivering, chattering of the teeth, &c., which lasted two or three hours. Accompanying the chill there was violent pain in the wrist, extremities generally, as well as in the head and back, which continued distressing throughout the attack. Surface rather cool, and pulse frequent and weak throughout. Had a mild cholera morbus, producing five or six operations from bowels, with nausea and occasional vomiting, and troublesome eructations of gas. Great prostration, with numbness, restlessness, and constant tossing about in bed. Breathing quick and distressed; stiffness of wrists, hands, arms, and neck; purple spots varying in size from the head of a pin to that of a three-cent piece on neck, face, breast, abdomen, arms, and surface generally were observed about the commencement of the attack by the female who assisted her to dress for bed. She had several fainting fits, in one of which she died about two o'clock A. M. on the 20th—the attack having lasted just twelve hours from the time she felt the pain in her wrist. Dr. O. examined the body himself, and found nothing but the purple spots referred to with a general livid appearance of the surface.

In addition to the above I have, through the kindness of professional friends, seen three other cases of this disease occurring subsequently. In one of them only I assisted in the management of the case. Two of them are entirely convalescent, the other resulted in death. These also were females.

The simple narration of three cases of disease, wearing to us a strange and fearful livery, might of itself be calculated to awaken in our minds some feeling of curiosity and interest. But when it is attempted to be shown that these isolated cases are probably the heralds of a fearfully fatal epidemic, similar to that which more than fifty years ago ravaged other portions of this continent, and whose track of desolation and death was said to be equalled only by that of the plague, then they become a subject for our profoundest consideration, and demand our deepest and severest scrutiny.

It is not an easy matter to detect at first sight a disease which has never

been seen before, if it be one varying much in its mode of attack and general appearance, and more especially if it be one which has prevailed so seldom in the history of the world as to attract but little notice from medical writers. It has now been more than half a century since we have had any published medical account of the prevalence of this disease anywhere on the globe, and our accounts of it previous to that period have been but few, and at long intervals of time.

After the fatal termination of the first of these cases I frankly told the family I did not comprehend the disease—that it was new to me, and I could not give it a name, and indeed if I had been familiar with the history and features of the disease in question, the aggregation of symptoms in this particular case taken by itself, was not sufficiently distinct and satisfactory to justify me in assigning it to a nomenclature so foreign and new to this section. I suggested that it probably was a case of undeveloped scarlet fever which had invaded the system with such power and malignity as to overwhelm the vital powers before sufficient time had been allowed for the full development of its distinctive and characteristic features. And with this explanation I should probably have rested my own mind, had not my curiosity been still further excited by the appearance in the same family of another case presenting a similar identity. I searched all the systematic works on the practice of medicine at my command, besides numerous monographs on eruptive and other malignant fevers, without finding any elucidation to my perplexity. I had a vague recollection of having read a description of a disease resembling it many years ago under the head of "Spotted Fever," but the few works in which I could find "Spotted Fever" mentioned treated of it as a form of typhus, and a disease of long duration. I also talked with several of my professional friends without obtaining any satisfactory information. I invited, at different times, my friends, Dr. J. M. Williams, Dr. Dillard, and Dr. J. S. Weatherly, to visit and examine the patients with me—none of them had ever met with a similar disease. Dr. Weatherly said he had never seen or read of a malady resembling it, but stated that he had *heard* of a very fatal disease which had prevailed in some portions of the State of Georgia, called "Spotted Fever," and suggested from the purple spots and other general malignant appearance of this case, as well as from the entire want of analogy between this and any other disease which we are in the habit of meeting here, that this might be of that character.

My mind was deeply interested in the subject, and in searching still further through my library to gain some clue, or to gather some information about the disease which was so strange and novel to me, I came across a little book entitled *A Treatise on a Malignant Epidemic, commonly called Spotted Fever*, by Dr. Elisha North, of Goshen, Coanecticut, published in 1811. On opening this little volume I discovered that the disease with which I had been dealing, and which had so worried and perplexed me, was nothing less than the deadly spotted fever, and was there

described with the most perfect accuracy. In this book is also republished a number of essays on the disease by different authors as it prevailed in New England from 1806 to 1810. This, with the report made to the Massachusetts Medical Society by a committee appointed for that purpose, composed of Drs. Walsh, Jackson, and J. C. Warren, contains all that is known of this disease of any interest or value that I have been able to meet with up to the present time.

The disease first made its appearance on this continent in the town of Medfield, Mass., and afterwards in Connecticut, Vermont, Rhode Island, New York, and other sections from 1806 to 1810. The accounts which we have of it are from physicians, presidents of colleges, clergymen, editors, and other persons, all concurring that it was a most dreadful and fatal malady—coming among them “like a flood of mighty waters, bringing along with it all the horrors of a most dreadful plague.” Most of the physicians who wrote on it about that period, call it “a new and strange disease,” “a singular and fatal malady,” and there is no reference or allusion by most of them to its having occurred in any other country, or at any other era of the world’s history. Some one has suggested that it is the disease treated of by Sydenham in his “*Febris Nova*,” but I have recently read this account, and am satisfied that the author in his treatise under this head had reference to a form of typhus, differing materially from spotted fever, and that he nowhere in his work has described a condition bearing any striking similitude to it. Dr. Arnell, in his account of the spotted fever which prevailed in Orange County, N. Y., in the epidemic spoken of as having occurred in the early portion of the present century (republished in Dr. North’s book), says, in reading the *Medicus Novissimus*, which was published about the beginning of the eighteenth century, he found a fever there described as prevailing about London, partaking of all the most prominent symptoms of spotted fever. The following is an extract which he makes from that work, and which is probably the oldest account on record of a disease bearing a very strong resemblance to it:—

“It is attended with very severe symptoms, as violent pains of the head and stomach, frequent shivering, and a sudden but very great weakness without manifest cause, anxiety and pains in the back and loins; the breath smells strong; there is great thirst, continual waking, spots sometimes appear on the body, the pulse is unequal and very low; urine not so high coloured as in simple fevers. There are sometimes convulsions, delirium, &c. &c. * * * * This is a very dangerous disease, and often kills in a very little time. If the hands tremble much when the pulse is felt the disease doth most commonly end in death, especially if there be a foul tongue, a ghastly countenance, and the eyes sunk in the head. The cure must be undertaken as soon as possible, for this disease admits of no delay.”

Our descriptions of spotted fever, until it made its appearance on this continent about the beginning of the present century, have generally been

so meagre and scant as to afford no very satisfactory information regarding its previous history. It is said to have prevailed in many portions of the world since the beginning of the sixteenth century, but I have been enabled to find no record of a disease similar in all its aspects to the cases recently witnessed by me, except the one described by the physicians of New England as occurring from 1806 to 1810. Certain it is that it is a disease of rare occurrence; for, one possessing such striking and anomalous features could not have failed to have attracted more general notice from medical philosophers and historians than has been accorded to this, if it had been very frequently met with.

In the main there is great uniformity in the descriptions of the disease by those who observed it as it prevailed on this continent in the beginning of the present century. I have read perhaps a dozen accounts of it as it occurred in different localities—all concerning in the material and striking features of the disease, with perhaps one exception—I have in my library a work written by “Dr. E. Hale on Spotted Fever as it appeared in Gardiner, Maine, in the spring of 1814.” I do not think that many of the cases detailed by this author were similar to those described by the physicians of New England in the epidemic which prevailed from 1806 to 1810, or to those recently met with by myself.

Of all the descriptions of the disease which I have read, that which gives to my mind the most comprehensive and faithful picture, is the one by Dr. Elisha North, before referred to; and, for the purpose of showing the analogy between the disease described by him as spotted fever, and the cases which I have detailed in the beginning of this article, I propose to transcribe a portion of one of his chapters.

In regard to the premonitions of the disease our author says: “If there is any one symptom which may be regarded as a premonitory symptom in this disease in *all its varieties*, it is SORE THROAT.” All writers on the disease concur in this.

Of “the symptoms of the first species of the fever,” he says:—

“A great, surprising, and sudden loss of strength is a constant and prominent symptom; a cold surface also presents itself, sometimes accompanied with chills, sometimes not. The extremities in the cold stage appear of a purplish or livid colour. Violent pains in the head and many times in the limbs, are among the first symptoms; sometimes one, at other times the other, is first attacked. When the pain commences in the limb it soon mounts to the head. Distress about the præcordia violent and extreme, also universal agony of the whole system, and numbness of the extremities, are often added to the above list of symptoms. The breathing is often laborious and attended with frequent sighing. Syncope sometimes occurs. The pulse in this and all the varieties and stages of this complaint, is soft, weak, and never hard, although sometimes as slow and even slower than in health; it is often intermitting or totally absent, even in cases in which the patient has afterwards recovered. The tongue is generally covered with a white coat; but in some bilious cases it is of a brownish hue, some-

times it has been observed to have a bloodless appearance, which has been considered as almost a certain token of approaching death. * * * * There is loss of appetite, sickness of stomach, and vomiting. The worst form this disease ever assumes, particularly in children, is that of coma or cholera-morbus. It frequently assumes the form of a violent mania at the time or within a few hours of the attack, particularly in sanguine young men. Sometimes delirium is among the first symptoms; sometimes coma; and many times petechiæ. This symptom does not occur so often as the name which the disease has obtained would lead us to expect; these vary in size and in colour, from a bright red to a dark purple."

"Unless the patient recovers he commonly dies within the first twelve, twenty-four, or forty-eight hours. Death is ushered in by the gradual giving up of the powers of life, by syncope, by febrile apoplexy, or by convulsions. In those who do recover the disorder puts on, either before or soon after the expiration of the first forty-eight hours the form of a second variety of this disease; or, to express myself in the words of others, 'runs into a mild typhus of uncertain duration.'"

Of the petechial or purple spots or vibices, he observes that they "commonly appeared on the face, neck, extremities, and frequently over the whole body. They were generally observed in the early stages of the disease. In size they were various, commonly the head of a pin and a six cent bit would mark the two extremes. These spots were evidently formed by extravasated blood: they did not rise above the surface and would not recede upon pressure. In colour they varied from a common to a very dark purple, and the darker the shade the more fatal the prognosis." He also describes a milder form of the disease likewise ushered in by chills, but soon followed by a warm surface. This he calls the "second species of the fever," and says it resembles "a mild typhus or the fever attendant on scarlatina; no petechia, but a red fiery eruption, or what is perhaps more common, no eruption at all; pain in the head and limbs is less severe; less universal agony of the system; loss of appetite, nausea, but seldom vomiting or purging; no coma; no delirium; * * * slight sore throat. * * * This species or variety resembles the scarlatina. * * * The red fiery eruptions may generally be regarded when they do occur as designating the second variety of this disease."

There is still another *species* of this disease which our author speaks of as combining the more unusual symptoms of the fever:—

"These are a dilatation and in some instances a contraction of the pupils of the eyes; redness and suffusion of the eyes; blindness in some, in others double or triple vision; a drawing back of the head with a kind of clonic spasm of the muscles of the neck; aphthæ in the throat; an inflammation like erysipelas upon the limbs; swelling like rheumatism of the joints; paralysis of an arm or a leg, or both; carbuncles and buboes; strangury, and to such a degree as to require the use of the catheter; a violent pain in a finger or toe; hysteric symptoms; pain like colic in the bowels; a slight cough; œdematous and shining appearance of the skin; transitory and evanescent flashes of heat; erratic pains flying from part to part; a deadly feeling of the stomach; a corpse-like rigidity of the limbs, hemorrhages, &c. &c." Such are some of its features as detailed by North.

All authors agree that the cases which terminate fatally are not to do so within forty-eight hours from the invasion of the disease. This is gener-

ally estimated from the time of the initial chill—the premonitory sore throat not being reckoned in this calculation. Most generally perhaps they terminate within twelve or twenty-four hours—often in a much shorter time, and occasionally in from two to six hours.

The disease seems to have no uniform, settled or definite course to run in cases of recovery. Convalescence may commence in from one to five days or may be prolonged to as many weeks, subject to repeated relapses.

Unlike most other diseases, no one symptom seems to be essential to the diagnosis, except *sore throat*, which, as a *premonitory* symptom, may be considered as an *varying*, but yet, often so slight as not to be spoken of by the patient unless he is particularly questioned concerning it. Notwithstanding the non-essentiality of any one symptom of the disease, I have yet never met with a malady whose general physiognomy was more striking, or in which the physician would more readily make up a correct diagnosis after he is once familiar with it. And although when he encounters it for the first time he may not be able to assign to it the name by which it is commonly known, he will yet in most instances readily acknowledge he has never seen any condition for which he would be likely to mistake it. And whilst it is variable in its character and some of the prominent symptoms sometimes wanting, yet the congregation of phenomena is so striking that one or two, or three, of any of the symptoms may be absent in a particular case and yet the disease retain a most marked individuality and be easily recognized by one familiar with it.

In all the places where we have had any account of the existence of spotted fever, it has generally made its advent about the breaking up of the frosts of winter, or in the early spring months. Sometimes sporadic cases have appeared as early as January, but it has not often assumed an epidemic form until about the close of winter. In a few instances sporadic cases of the disease have occurred which were not followed by an epidemic. It is said to make its attack in stormy, rainy, or damp weather. By some it is said to follow in the trains of armies, and in this way to have spread over Europe during the last century, and in Germany was called the “war fever,” or the “war plague,” but I have no doubt the fever here alluded to, as in many other instances, was the *typhus petechialis*. Children and young persons are most liable to its attacks, and females more than males, yet no age or sex is exempt from it.

All agree that it is not contagious—on this point I have not seen any difference of opinion.

Some objection has been made to the name *spotted fever*, which has been given to this disease, but I see no reason to quarrel with those who first described it under this head. When it is possible to do so, of course, it is more intelligible to give that name to a disease which is most suggestive of the morbid changes induced by it, or one which denotes a constant and prominent symptom, but there is no constant and *varying* symptom in

the disease in question, which does not belong to some of those with which it has been confounded; and our knowledge of its pathology is so imperfect, that I doubt if we could improve its nomenclature even at the present day.

I have no doubt that spotted fever has been treated of under many different names, and confounded with many different diseases—such as typhus, typhoid, jail, putrid, camp, hospital, scarlet, and congestive fever; besides rheumatism, cholera-morbus, apoplexy, phrenitis, cerebro-spinal-meningitis, acute hydrocephalus internus, and typhoid pneumonia. To many of which it bears a resemblance in the exaggeration of some of its prominent and varied symptoms, whilst to others no farther analogy than the presence of a hemorrhagic tendency, or the appearance at some of its stages of purple or petechial spots would indicate.

Judging from the perfect silence with which most of our standard authors on the practice of medicine have treated this disease, and the confusion which seems to exist in the minds of some of those who have alluded to it, it really seems that there has been an absence of information on the subject, mostly, perhaps, growing out of the fact that so many other diseases have been treated of under the same name.

That there is a distinct disease commonly known as *spotted fever*, *sui-generis* in its nature, and better entitled to this than any other appellation, no one can watch its progress in well-marked cases and study its history without being fully convinced. Yet it is so multifarious in its symptoms, bringing in its train so many of the malignant phenomena which sometimes attend other diseases, and still so rare in its visitations, that it is not strange when it does occur that it should often be misnamed and confounded with and treated of under the names of other and distinct diseases, which to the eyes of the beholder, who is perhaps a stranger to it, it seems most closely to resemble.

I have said it is sometimes confounded with typhus and typhoid fever, to which the milder forms of it have some resemblance, especially in its low grade of action, in its hemorrhagic tendency, petechial eruptions or purple spots, and perhaps in some other respects. Yet it differs much in its violent invasion and progress, in its short duration in fatal cases, in its agonizing pains, in its early numbness or paralysis, and in many other essential particulars. On this head Dr. Elisha Bartlett, who is probably the best authority on this continent on the subject of typhus and typhoid fever, and who evidently thinks spotted fever is not of this character, says in his work on fever:—

“It is not easy at the present day, upon such evidence as we possess, to decide with any confidence upon the precise character of the spotted fever of New England. Without going any farther into the consideration of this question here, I will merely observe, that an examination of most of the records that have been left us of this disease has induced me to believe that

it belongs to that class of *new* and more or less temporary epidemics, each having its peculiar character, and marked by its peculiar phenomena, and depending upon new and peculiar combinations of unknown morbid influences—which have always from time to time made their appearance, rather than to the class of established and permanent maladies.”

It is evident that Dr. Bartlett thought it a new disease having a pathology distinct and peculiar, though perhaps not well understood; entitled to the name which it bears, and should not be confounded with any of our “established and permanent maladies,” many of which it resembles in some particulars.

Whilst to those who are entirely ignorant of its character and history it may sometimes be disguised under its resemblance to hysteria, scarlatina, congestive fever, acute hydrocephalus internus, phreuitis, colic, and typhoid pneumonia, yet it is so evident it should not be confounded with any of these that I will not attempt to draw the distinction between them. I am sure no one who ever meets with a well-marked case of spotted fever, after he has been made familiar with its history, will ever mistake it for any of these. Whilst in the intense pain and soreness of a joint or a limb it closely resembles acute rheumatism, the analogy stops there, and the extreme prostration, the peculiar and varying pulse, the nausea and vomiting, the deranged breathing and vision, the cold or mottled surface, the purple spots in many instances, the syncope and paralysis—all or a portion of these symptoms, with often others added scarcely less striking, will soon convince the physician that he is not dealing with a simple case of rheumatism. Cerebro-spinal meningitis has occasionally been confounded with spotted fever, and in extreme and unusual cases of the former there is doubtless sometimes a striking similitude between the phenomena which attend the two diseases. We will not think this very strange, however, when we remember that both these diseases probably hold their seats in the cerebro-spinal system of nerves. Cerebro-spinal meningitis has in the general a history and pathology of its own, which though varying somewhat in different localities and in different epidemics is yet sufficiently definite and distinct as to give it a place among our “permanent and established” diseases; and though in extreme malignant and otherwise rare and unusual cases, it may exhibit many of the symptoms which more usually attend spotted fever, yet in the main the diagnosis between the two diseases will not be difficult.

In cerebro-spinal meningitis of an ordinary or usually well-marked character we find this condition presented (I quote from *Watson's Practice, Condie's Notes*, page 328). The picture is not overdrawn, nor yet does it fall short of a correct representation of the disease, without marking any of its extremes:—

“The disease is in general characterized by acute and fixed pain in the head, rachialgia, aversion to light, injection of the conjunctivæ, increased sensibility of the surface, acute cries, low muttering delirium or coma, pain and stiffness of the posterior cervical muscles, with permanent retraction

of the head, often rigidity of the large extensors of the spine, spasmodic tremors or twitchings of the muscles, particularly of the face, and tetanic convulsions of the limbs. When a disease marked by several or all of the above symptoms occurs, especially as an epidemic, we may pretty confidently pronounce it to be cerebro-spinal meningitis."

Compare this description with the one given by Dr. North of spotted fever (before quoted), or that of the committee appointed by the Massachusetts Medical Society, too long for insertion here, or with the symptoms which were observed in the three fatal cases detailed in the beginning of this article, and the difference between the two diseases, as they ordinarily appear, will be at once admitted to be both marked and manifest. The sore throat which seems to be invariable in spotted fever is never present in cerebro-spinal meningitis. In the latter the pain begins in the head, and though not always confined to that point, is yet much more troublesome there and along the course of the spine than at any other portion of the body, whilst in spotted fever the pain frequently begins at some other point than the head, often in a joint of one of the extremities, or the wrist, finger, toe, or stomach. Fits of syncope occur often in spotted fever, never in cerebro-spinal meningitis; intolerance of light and sound, tonic rigidity of the muscles of the back and neck, as in opisthotonos, are almost constant symptoms in cerebro-spinal meningitis, whilst they are of rare occurrence in spotted fever; petechial or purple spots in spotted fever, though not considered pathognomonic, are present in a greater or less number of the cases in all the epidemics I have read of, and in fatal cases they are rarely absent, whilst in cerebro-spinal meningitis, even in those cases which prove fatal, their presence is the exception to the general rule, whilst in most of the epidemics which I have read of, they did not appear in any case, at any stage of the disease. In this place, where the disease has prevailed to a considerable extent on more than one occasion, I never saw petechial or purple spots in any instance, and Dr. Ames, in all the cases reported by him, speaks of purple spots in one single instance only. Purple spots in spotted fever not unfrequently make their appearance twenty-four or thirty-six hours before any other morbid manifestation is observed, as is shown in the first case detailed in this paper as well as by the published accounts of the disease—in cerebro-spinal meningitis, never. Death, when it takes place in cerebro-spinal meningitis, usually occurs in four or five days—in spotted fever it rarely takes place after forty-eight hours, and generally within twenty-four hours; cerebro-spinal meningitis generally attacks the male sex, and in large epidemics it is said not to have attacked a female—in Ireland during a large epidemic "boys were exclusively attacked." In Texas there was not a single instance of a female having it, and in France it was confined "for the most part to the young coarscripts." In spotted fever females are most often attacked, and generally those of a delicate and nervous constitution. The six cases spoken of

as having occurred in this place were all females. Another fact which may serve to establish an essential difference between the two diseases may be observed in the effect which remedies have been found to exert over them. In cerebro-spinal meningitis the remedial agents most popular and generally relied upon are evacuants and antiphlogistics, such as cupping, leeching, and general bloodletting, tartar-emetic, mercurials, active purgatives, and other depletants. I am aware that this mode of treatment is not universally approved, but still it is probably the one most generally adopted, and is said by many to exert a most happy influence over the disease, whilst in spotted fever they not only afford no relief but are supposed by many to be absolutely mischievous, often speedily hastening a fatal termination with the greatest certainty. On the other hand, heating external applications, with stimulating drinks, as wine, brandy, camphor and opium are not only tolerated in what would be considered heroic and unjustifiable doses in other diseases, but are positively curative in their effects.

The prognosis of spotted fever is not generally difficult. The symptoms which indicate the greatest malignity of the disease are a long and severe chill, with surface remaining cold and mottled, or difficult reaction, and if established at all of short duration, or in inverse ratio to the chill; the early appearance of petechiæ—the darker the more fatal their indication; a bloodless, shrivelled, and par-boiled appearance of the tongue, mouth, and throat; troublesome nausea and vomiting with eructations of gas; cholera-morbus; numbness, paralysis; rigidity of limbs with agonizing pains in the extremities, head, and stomach; great prostration; difficult deglutition; double or triple vision or blindness; fits of syncope and convulsions or coma. When all or many of these symptoms are present the case may be considered as hopeless. Authors say, however, that recovery does take place sometimes when many of these usually fatal symptoms occur, and that patients are occasionally “restored to life and health after they have apparently met the cold embraces of death,” though I apprehend that instances of the kind are very rare.

When the chill is of short duration, or if reaction is complete with a hot skin, a free perspiration, and full pulse; when the tongue is of a natural colour; if there is no nausea or vomiting, or if this has been overcome, and appropriate remedies can be retained; if the prostration of strength is not extreme, and there is delirium instead of coma, the probability is that convalescence will commence in from twenty-four to sixty hours, and end in the recovery of the patient in a few days, or if the disease continues, it will assume the form of a “wild typhus of uncertain duration,” and after an indefinite number of days or weeks, terminate in recovery. When petechiæ exist in cases which recover they are apt to result in troublesome ulcerations or sores.

As to the cause of spotted fever we know but little. That it is not contagious all agree. Many suggestions have been hazarded but nothing

satisfactory. It is most probably a *blood poison*, which owes its origio to some atmospheric or pluuctary chougcs or iofluences which we do not us yet comprehend.

The records which have been left os io relation to the post-mortem lesions of spotted fever point to the braio os their principol seat, though they ore few ond unsatisfactory io relotion to the nature of these lesions. After witnessing its pheamena daring life it would require the most namerous, best authenticated, and most overwhelming array of post-mortem evidences to convicee me that a disease so essentially astheaic in its oatward manifestations, could leave post-mortem lesions of an inflammutory character.

The pathology of spotted fever is aot well understood. What the peculiar morhific iofluence is which is ot work opoo the groot nervous centres of the braio and spine we do not know. The profoond coma, the deranged circolation, the intense nervoos pains in the joints ond muscles; the numbness, paralysis, blindness, spasms, and convulsions; the deranged sensntions; the delirium, maaia, and hysterical symptoms; the distressed breathing without organic changes in the lungs; the nausea, vomitiag, and purging wihoat the presence of any offensive matter or traces of any morbid lesions in the alitoentary canol, all conspire to show that some powerful ood deadly puison is ot work upoa these groot centres. That it is not oo inflammation, we have good reasoa to believe, but in what way it produces these peculiar pheoomeno is as yet hut conjecture. Like cholera, and other rare and fotnl epidemics which moke only occasionnl and transient visitatioas among us, though we have watched their progress, and recorded their phenomena, and perhaps arrived at a conelusion more or less just concecring their treatment, we are yet, in the preseot state of our knowledge, not permitted to know their essestial noture, or to comprehend the laws which regulate their appearance.

In relation to the treatment of spotted fever we perhins know more than we do of the causes which work its production or the iofluences which regulate its morbid octioo. In many places where it prevoiled during the years alluded to, it was marked by o fearful mortality, ond was looked upon with hut little less dread than the plague—killing half and sometimes more than half of those ottacked. But if we may believe the published accounts which we have of it, it was ofterwords regarded by many as a very manogeable disease, ond moch more amenable to treatment thun was ot first supposed.

The most approved plan of trentment, ond I have no doubt the most soccessful and oppropriate one is the avoidance in the early stages of the disease of all remedies knowa as evacuants, depletaats, and ontiphlogisties, and the substitution in their stead of remedial ogents of an entirely opposite aature, such as hot and sweating external oplications, sinapisms, blisters, hot fomentations, hottles of hot water or hot stones, or blocks of wood boiled in hot woter, or hot steom cooveyed under the bedclothes,

together with the internal use of stimulating teas, wine, brandy, camphor, bork, opium and the like. Everything in fact which is calculated to determine to the surface, or produce and maintain an increased vigor in the arterial and capillary system. There seems to be a wonderful degree of tolerance for stimulants and opiates by patients suffering with this disease. Two bottles of Madeira or Port wine have very frequently been given within twenty-four hours, and sometimes that quantity in twelve hours, besides other stimulating and heating remedies, and with good effect. One physician tells us he has given as much as a half gallon of brandy with one bottle of wine and 240 drops of laudanum, besides other stimulating remedies within twenty-four hours, in a case "severely attacked with universal pains, totally deranged, very cold, eyes red and suffused, livid spots in various parts of the body, and deglutition difficult. * * * Symptoms very much resembling hydrophobia," at the end of which time his patient "could see well, had his vision perfectly restored, was easy, and not the least symptom of intoxication any more than he would have had if he had drunk nothing but cold water."

Drs. Hoskell, Spooner, and Holmes, in their account of spotted fever, say:—

"To what extent the most powerful of these diffusible stimuli may be safely and necessarily employed the following facts will show: A young woman, aged about 20 years, who recovered from the disease, being violently attacked, and a high delirium with great distress supervening, took more than a quart of brandy, and not less than twenty grains of good Turkey opium in less than twelve hours, and before any material mitigation of her disease could be obtained, and what is truly wonderful without the least appearance of intoxication. Indeed, we have been obliged frequently to administer ten grains of opium for a dose in some of the most violent cases, * * * and have never known it to produce stupor in a single instance."

There are many other instances on record corroborative of these facts. In one case of recovery of this disease in the treatment of which I assisted, but which for private reasons I have not detailed here, stimulants and opiates were borne to a most surprising extent with marked benefit to the disease and without giving rise to the ordinary intoxicating or otherwise unpleasant effects of these remedies.

I have ever been opposed to heroic remedies, or inordinate doses of medicine, and in most diseases look for my greatest assistance in bringing about a cure to the "*vis medicatrix naturæ*," but it seems to me if there is a disease in which not only prompt and active but even heroic medication is justifiable, it is in the one under consideration. True, my experience with it is limited, but yet it has been sufficient to satisfy me that I have never met with a disease in which the use of stimulants and opiates was tolerated to the same extent.

Of course all patients will not bear such quantities of stimulants and

opiates as are indicated above, and indeed I am persuaded that the cases are very few, even in this disease, in the treatment of which such heroic dosing should be imitated, or would even be justifiable. In all cases these remedies should be gradually withdrawn as soon as the urgent symptoms have been relieved.

In relation also to the external or sweating remedies, it is advised by all not to push them after the functions of the skin have been fully established, and attended with sufficient warmth and a good degree of arterial reaction.

As regards also the administration of cathartics, this is not only admissible but beneficial after the first stage or the stage of congestion and prostration has passed off.

I have not attempted more than a general outline of the plan of treatment which is thought most appropriate and successful in this disease, without reference to the special application of particular remedies, or such as are regarded as of secondary or subordinate value.

Believing that I have had not only opportunities but incentives to investigate this disease not known or felt by most practitioners, I thought proper to give not only my own crude observations and reflections in regard to it, but something of what is known and taught of it by others. I am aware that the sketch is very imperfect, but it is as full as the limited time at my disposal would allow me to make it. Should the disease prevail here in any other than a sporadic form, which at this time does not seem probable, I may take occasion to allude to the subject hereafter.

ANT. II.—*Entero-colitis, or Chronic Diarrhœa. With some Practical Observations upon its Nature and Treatment.* By W. KEMPSTER, M.D., of Syracuse, N. Y.

THE dividing line between acute diarrhœa and dysentery is as clearly defined and as readily recognized as it is between most diseases of different natures and presenting different degrees of intensity, although affecting the same tissue.

But the name chronic diarrhœa is usually bestowed upon a long-continued flux from the bowels, even after the discharges have lost their feculent appearance and have become dysenteric in their character.

Some confusion has arisen from this application of the same nosological term to apparently different conditions of the structure affected, and not a little fault has been found with this seemingly loose and inaccurate nomenclature by those technical gentlemen who must be "critical or nothing."

It is the object of the writer to reconcile, if possible, the seeming differ-