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INTESTINAL HEMORRHAGE IN TYPHOID FEVER.

Read before the Providence Medical Association, Nov. 4, 1872.

By CHARLES W. PARSONS, M.D., Providence, R. I.

The death of Dr. Lyman L. Swan, a valued member of this Association, gives a particular and melancholy interest to the disease and the special symptom by which he died. At the meeting held in respect for his memory on the 23d of September, it was mentioned that after being somewhat unwell for a few days, he walked about and packed his carpet-bag, on Monday the 9th of September, made arrangements for an expected illness, and took to his bed that day. Dr. Brown, who attended him with great fidelity, had a few years before seen him through an attack of mumps, which was accompanied by so much prostration and delirium as to be alarming. He knew also, that Dr. Swan had been working hard in his profession, and had had extra fatigue and anxiety on account of the sickness and death of a brother, from heart-disease, at the country homestead some nine miles distant. Anticipating a serious attack, Dr. Brown called in Dr. Collins, who visited constantly in consultation, beginning on Wednesday, September 11th. Dr. Swan early showed great weakness, especially by the voice, which was husky or whispering. He had not much delirium, less throughout this disease than with the mumps. He was rather constipated at first, took some aperient medicine, and never had any great diarrhoea.

In the night succeeding Thursday, Sept. 19th, ten days after his illness may be considered to have begun, he had his first hemorrhage from the bowels. This occurred again, very profusely, toward noon of next day. These repeated losses of blood rapidly exhausted his strength; but his intellect was little impaired; after this excessive hemorrhage, he executed his will. His voice returned to some extent that evening; but his strength and pulse did not, and he died about 2 A.M., Saturday, September 21st. If we date his typhoid fever from the time when he took to bed, on which same day he had been walking in the street, then he had entered on the twelfth day of his disease. He was nearly 34 years old.

From the interest we all feel in this case, personally and professionally, I have been led to look up the recorded experience of physicians who have seen much of typhoid fever, and seek an answer to some questions that occur in relation to this symptom of hemorrhage from the bowels.

1. The frequency of this symptom in typhoid fever varies a good deal in the experience of different observers. Doubtful diagnosis may explain part of this diversity, but not all.

No reports in the English language have thrown more light on the natural history of continued fevers than Dr. (now Sir William) Jenner's. At the London Fever Hospital, in the years 1847–49, when typhus spread from Ireland to Great Britain and the United States, he collected nearly 2000 accurate reports of cases. After separating cases of relapsing fever, he selects from the others those fatal cases of which the diagnosis had been confirmed by autopsy. There were 68 such cases and records of post-mortem examinations. Of these, 23 presented the intestinal and mesenteric lesion—the anatomical sign of typhoid fever—43 did not present it. The two groups were named by him typhoid and typhus, the distinction being based on these post-mortem appearances. They presented marked differences in their history, so different, indeed, as to render their separation a matter of absolute necessity, if accuracy was to be maintained in the descrip—
tion of these diseases, or certainty arrived at in their treatment." The typhoid cases (or those where the lesion referred to did exist) were all under 40 years old; nearly one-third of the others were over 50; the average duration of the fatal cases was, in the first group, 22 days; in the second, 14; the eruption was, according to Jenner, as different in the two sets of cases "as well could be, considering that both were of a reddish hue." Other distinctions show that these fever cases make two groups, generally unlike in important points, though these may run into one another. Now, in 15 of the typhoid cases where the presence or absence of epistaxis is mentioned, it occurred in 5 (or one-third); in 23 cases of typhus it occurred in none. And Jenner's report states that hemorrhage from the bowels occurred in one-third of the cases he calls typhoid, in not one of the typhus. Only one of the typhus patients in three years had discharge of blood from the bowels, and that was an old man with hemorrhoids.

Dr. John B. S. Jackson, for many years the leading morbid anatomist of Boston, reports in this Journal, Aug. 8th, 1872, 43 fatal cases of typhoid, of which he had some notes of the post-mortem appearances. In 5 of these, hemorrhage from the bowels was considered the cause of death.

Of 303 cases of typhoid, at the Massachusetts General Hospital, analyzed by Dr. James Jackson, 31 presented this symptom. Flint observed it in 3 out of 73 cases that he analyzed. This autumn there have been 12 cases in the Rhode Island Hospital; two had hemorrhage.

At the Hôtel Dieu, in Paris, Louis observed 46 fatal cases, which are analyzed in his treatise on Fever, and of which he considered the diagnosis made out. Of these, only two presented this symptom, and one of these (observation xlv.) ranked by him as latent typhoid, was a tubercular case, the record of which, as he gives it, reads very much like acute tuberculosis. He speaks of three cases of this hemorrhage in typhoid—in each repeated for a few days—and followed by recovery.

Chomel, at the same hospital, observed this hemorrhage during life in 5 out of 42 fatal cases, and concealed hemorrhage within the small intestines, ascertained after death, in one more.

All these statements must be considered as referring to adults, or those past the age of puberty. In the typhoid of children, hemorrhage appears to be rare. Rilliet and Barthez, in their great work on Dis-

cases of Children, give no instance of it in 111 cases of the disease. They quote one at the age of 14, a fatal case, observed by M. Taupin.

We cannot make any general statement from these figures, as to the proportion of cases of typhoid in which hemorrhage from the bowels occurs. Adding up the whole list of fatal cases, observed in London, Paris and this country, we find that this symptom was present in about 1/3 of these fatal cases (or 1 in 7.7). Adding up the cases, fatal or not, observed by Jackson and Flint in this country, and at our hospital this autumn, we find that it occurred in about 1/4 of all, or 1 in 10.77 (cases below the age of 15 excluded).

As hemorrhage may sometimes be overlooked, where the dejections are not constantly examined by the physician, its frequency is liable to be understated rather than exaggerated. Some allowance ought also to be made for cases of concealed hemorrhage. I have alluded to such a case reported by Chomel. Andral relates the history of a man, aged 28, who had had diarrhea three weeks before entering the hospital, lived in hospital 18 days, growing weaker, but passing no blood. After death, it was found that the lower two-thirds of the small intestine were filled with dark blood, much clotted; none had passed the ileo-cœcal valve.

II. As to the fatality of this accident, or its influence on the mortality of the disease, it is difficult to get adequate statistical evidence. The interest taken in the morbid anatomy of typhoid fever has drawn special attention to fatal cases, especially in the clinical reports of the earlier French observers. I had supposed that this symptom was one of very grave import, and have been surprised at the amount of testimony to the opposite effect given by physicians of very large experience.

Of 6 cases reported by Flint, 5 recovered, though in one the hemorrhage was so profuse as to cause syncope and loss of pulse at the wrist for several hours.

Of Dr. Jackson’s 31 cases at the Massachusetts General Hospital, 20 ended favorably.

He remarks, in his report on cases observed at that hospital, from 1821 to 1855, "In some instances, the hemorrhage was followed by relief, and in a few by well-marked and permanent relief. But in most, there was great weakness and sense of exhaustion in consequence of it."

Dr. Sutton, of Kentucky, in a paper on this disease, says he remembers 10 cases where hemorrhage occurred, and death
frowned in only 2; and in a note he adds, "Since writing the above, I have seen several other cases, but no death." Dr. Elisha Bartlett says that he had seen as many cases end in recovery as in death. The two recent patients at our hospital both recovered.

Graves, Trousseau and Austin Flint, three physicians of great experience, representing Ireland, France and this country, agree that, though hemorrhage is sometimes directly fatal, and sometimes helps to induce fatal prostration, still it does not, on the whole, add materially to the fatality of typhoid fever. Trousseau does not give the number of his cases, but quotes three where recovery followed copious hemorrhages, as well as three illustrative cases of death which he had seen within seven years. In one, the bleeding occurred on the 12th day, a large quantity of dark, fluid, very fetid blood being passed; it was repeated the next day; from that time the symptoms became sensibly less severe; the patient was convalescent in about a month from the beginning of the disease. In another, three large, bloody dejections occurred on the 24th day; "immediately after, I observed a marked improvement; in the evening, it was noted that the fever was moderate, that there was no abnormal heat, that there was an appearance of greater comfort, and a desire for food." Next day, "the pulse, till then above 120, had come down to 80." Three days later, there was again interstitial hemorrhage, with epistaxis. Speedy recovery followed. The case reminds one of a remark of Sir Henry Holland, that hemorrhage sometimes forms a crisis to this disease.

The French physicians who taught in the Paris hospitals more than twenty-five years ago regarded this symptom as a very grave one. Chomel, said, in his lectures: Of 7 cases where these hemorrhages were observed at Hotel Dieu, in 6 the disease was fatal; one recovered after large loss of blood. But the death is not commonly the immediate effect of this loss; of the 6, in only one was death notably hastened by bleeding.

I am afraid that this difference in results was partly owing to treatment. A large part of Chomel's patients were bled very soon after entering the hospital, when they had in most instances been sick already some days. For high fever or delirium, leeches behind the ears were frequently ordered afterward. The published cases do not show that these symptoms were relieved by taking blood. The diet was meagre.

The extent to which this depletive practice was sometimes carried, and the effects it produced, may be illustrated by these remarks of M. Andral, in a debate at the Academy of Medicine: "At one period of my medical life, I, too, used to bleed very largely [in typhoid fever]. I made not less than three, four or five abundant bleedings, near to one another, and to some individuals I had not less than two hundred leeches applied, for I was convinced it was necessary to attack congestion wherever I saw signs of it. Do not ask me what were the results of this practice. Habitually, after large bleedings, I saw the nervous symptoms increased, subcutaneous more marked, delirium more unyielding, and hemorrhages more frequent. I may say the same of pneumonia. I have seen patients who, after one or two bleedings, fell into prostration, breathing became more labored and noisy, expectoration was suppressed and death ensued. I may say the same of erysipelas, &c."

There is some reason to think that the fatality of this accident increases with advancing years. In 22 cases of hemorrhage, where the age was noted, the average age of the 9 who recovered was 24.51 years; of the 13 who died, 29.46, a difference of nearly five years.

III. Intestinal hemorrhage may take place at very various periods in the course of typhoid fever. The earliest appearance of it that I have seen recorded is in the following, from Andral: "The person had been sick only three days, and for that time had a febrile movement with not very strongly marked symptoms, when, suddenly, after some griping pains, he passed at one time more than a quart of blood. After this, he had a prolonged syncope. . . . The hemorrhage was not repeated, and the patient went through the usual course of a typhoid fever, which ended favorably."

Todd gives two cases, one occurring on the 5th, and one on the 7th day after the date from which the fever might be considered to have begun. Both patients recovered. Each lost about a pint at one time; and in one, blood continued to pass. Both were very much prostrated afterwards.

Including these, I have represented in the following table the date of first appearance of hemorrhage in 28 cases, half of which were fatal. Of course, the beginning of the fever often cannot be determined to a day.
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<table>
<thead>
<tr>
<th>Day of fever when hemorrhage first appeared</th>
<th>Recovered</th>
<th>Fatal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3d-5th (or 1st week)</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>9th-10th (or 2d week)</td>
<td>4</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>16th-22d (or 3d week)</td>
<td>3</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>23rd-29th (or 4th week)</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>32d</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>18</td>
<td>31</td>
</tr>
</tbody>
</table>

Before end of 2d week, 7 out of 11 died.
After beginning of 3d week, 6 out of 15 died.

### IV. This inquiry as to the period at which this symptom may occur leads us to ask on what local conditions it may depend. The leading features in the morbid anatomy of typhoid are well known. Rokitansky describes them as presenting four stages, which may be briefly indicated as follows: 1. Congestion in the mucous membrane. 2. Swelling of the glands, which he speaks of as typhus infiltration or deposit, in which period congestion retreats to, and becomes localized in or around the gland-patches. 3. Softening and elimination, when the labor of throwing off the local results of disease produces a new or secondary congestion, the vessels of the mucous membrane becoming filled with dark and viscid blood.

### 4. Ulceration.

Sometimes the glands slough and are thrown off in mass, involving a variable depth. In the Warren Anatomical Museum is a specimen, showing ulceration of Peyer's patches just above the ileo-ccecal valve, and a small slough hanging from one of them. Blood was found in the intestine below the slough, but none above. This man died about an hour and a half after symptoms of internal hemorrhage began, having meantime had a profuse discharge of blood.

Here, then, are three conditions of the mucous membrane in this disease, either of them liable to cause bleeding, intense congestion, ulceration, occasionally sloughing. We might suppose that bleeding would be less dangerous, more likely even to be salutary, in the congestion preceding ulceration, and the few facts just given in the table tend to confirm that idea. In some cases—it is impossible to say how many—hemorrhage is probably a natural relief to the overloaded vessels, analogous to opisthosis.

When the death of Dr. Swan, on the 12th day of his fever, was related, I thought it was too early for ulceration probably to have begun. But a reference to recorded cases shows the truth to be otherwise. Murchison, of London, says ulceration generally begins about the 9th or 10th day.

The earliest autopsy of typhoid fever I have read of was by Chomel, the patient having died on the 7th day. The man was 22 years old, attacked Jan. 16th, entered hospital Jan. 20th; had had headache, fever, diarrhoea, and was attacked that night with violent delirium; 21st, had delirium, full, hard pulse of 110; dry tongue, soreness on teeth, rosamina. Was bled. Next day was in muttering delirium; had ceased to answer questions; tongue and teeth in yet worse state; no diarrhoea; involuntary discharges of urine. Twelve leeches behind each ear were ordered; they bled freely, and that evening he died.

Several elliptical patches were found, swollen so as to project into the cavity of the bowels, some near the valve even pediculated or mushroom shaped. The projecting patches were pale, the mucous membrane around them very red, in some places livid. There was no ulceration.

Louis gives three autopsies of death on the 8th day. Two presented slight ulceration near the valve—in one near the centre of the patch nearest the valve, in one occupying solitary glands. The third had some thinning of mucous membrane over thickened patches, but it was nowhere quite destroyed. In an autopsy of the 10th day, there were some ulcers two or three lines broad. One patient died of perforation the 14th day.

Chomel gives nine autopsies of deaths within the second week. Of these, 4 presented no ulceration; two of these deaths were on the 8th, one the 11th, one the 12th day. Five died have them; these died, one on the 9th, one the 10th, two the 12th, one the 13th day.

Dr. J. B. S. Jackson says that in one of his autopsies, ulceration had not begun on the 17th day.

On the whole, then, if Dr. Swan died of hemorrhage with ulceration on the 12th day, there was nothing extraordinary in it.

V. Finally, on the practical questions of diagnosis and treatment, I have only two remarks to make.

In concealed hemorrhages, or before blood appears externally, bleeding may sometimes be suspected from sudden weakness, paleness or sinking, not explained by diarrhoea, nor accompanied by the pain of perforation. The temperature is often remarkably lowered; in two cases mentioned by Dr. E. A. Parkes, sinking to 98° at morning. Niemeyer remarks, 'Hæmorrhages, if abundant, often betray themselves before the appearance of blood in the dejections, by the collapse of the patient, accompanied by a sudden fall of his tem-
AGORAPHOBIA.

By S. G. WERBER, M.D. Harv.

Except that a very able article on this subject has just been published in the Archiv f. Psychiatrie und Nervenkrankheiten, vol. iii. 9, containing an analysis of 29 cases, I should not have referred to this subject again.

Dr. Williams considers this symptom simply as a form of vertigo. Vertigo is "a state in which it seems that all objects are turning round; or that the individual himself is performing a movement of gyration." Dunglisien. "The sensation of moving, or the appearance of moving objects without any real existence of movement." J. Spence Ramskill, in Reynolds's System of Medicine. So others might be quoted; but in all the idea of circular motion is mentioned as a prominent characteristic. A person subject to vertigo might dread to cross a street alone, but why should he have a similar dread when sitting in a crowded theatre, is not so easily explained. However, there is no question of vertigo in these cases. Three patients, whom I have seen since writing my last article, expressly deny that there is any sensation of dizziness or any swimming of the head. One of these could not cross a public square, was obliged to turn back and could not walk on the sidewalk next the square, but had to cross the street to the opposite side. Another, when at a concert or theatre felt oppressed or stifled, not from the close air of the room—for the same sensation was felt in a crowd in the street—but a sense as of want of breath, and she thought she should faint if she gave way to the feeling; her heart beat violently. The third patient was not dizzy except when he had a severe headache. She, however, had the sensations called agoraphobia on crossing a street or a square to such a degree that she would be obliged to come to a stop and wait a few minutes before proceeding. She expressly said she was not dizzy at such times, and did not think of being dizzy.

I have seen patients in whom the vertiginous motion seemed to be around the longitudinal axis of the body; another in whom it was around an axis perpendicular to this axis, so that when upright, objects seemed to revolve over his head. Again, I have had a patient who complained of an undulatory sensation when walking, as though he were on board a ship. Another has complained that the ground seemed to rise to meet him as he stepped, which may be the same as the last, differently described. I can understand how any of these sensations may be spoken of as a form of vertigo; but when there is no sense as of motion, no swimming of the head, I do not see the propriety of using the word vertigo, or even the expression, "a form of vertigo."

Dr. Williams objects to the name of agoraphobia, and that, for consistency, appropriate classical terms ought to be given to dread arising under other circumstances, as ecclesiaphobia. Inasmuch as ἀγοράφοβος means not only a market-place, but also an assembly of people, the term agoraphobia would seem appropriate for the dread of crossing a square, or dread of being in a crowded room.

Dr. Williams has attempted to weaken the importance of the symptom we are considering, because it occurs in connection with other symptoms. If a person knows what vertigo is, he would be less likely to confound it and agoraphobia; because he has fits of an epileptic character, it does not follow that agoraphobia is epileptoid.

In each of the cases criticized, there were causes operating which might well produce the condition of irritableness weakness or nervous erethism to which Dr. Cordes refers agoraphobia as a symptom, and it is not at all singular that other symptoms should be present referable to the same condition.

Dr. Williams does not describe the nature of the uneasiness to which he is subject under certain conditions accurately enough to render it certain whether he has ever experienced the sensation referred to as agoraphobia. In view of what he says, I can only suppose that he is not personally acquainted with it, and therefore has mistaken his sensations for it; it would also seem that he has not met persons suffering from this symptom or has not carefully questioned them in regard to their sensations. Otherwise, I do not see how he should confound it with vertigo.

However, Dr. Cordes touches upon all the points which I wish to mention.

Dr. E. Cordes prefers the name Platzangst to Agoraphobia. He says that some years ago, while greatly exhausted, he was him-