By means of this fluid, which he calls the intestinal fluid, aliments which are not digested in the stomach, are acted upon in the intestines. The property that the pancreatic juice possesses of transforming starch into sugar, and which until now has been considered its chief property, is a very subordinate one, and by no means peculiar, as almost all the other fluids of the economy possess it, viz., the saliva, serum of the blood, liquid of cysts, &c.

"All the effects produced by the pancreatic juice as above described, are equally well seen by taking the pancreas of a freshly-killed animal, as a chicken, dog, pig, &c., and bruising it, and pouring a little tepid water upon it. Let it stand, or agitate it a few minutes, and you have an artificial pancreatic fluid, with which you can perform all necessary experiments. If you kill the animal in a state of digestion, the fluid will be more active, as the pancreas is then in a state of greater activity. In the same way you can make artificial gastric juice, by taking the stomach of an animal. But the pancreas must be quite fresh, and the pancreatic fluid changes very quickly and loses its properties, whereas the gastric juice keeps indefinitely."

I am spending a few weeks in "the great metropolis," in sight seeing, with my family, and in visiting its numerous hospitals, and rich pathological museums. I am making, also, further additions to a valuable collection of pathological specimens which I have procured in Paris for the museum of the Albany Medical College. I expect to visit Belgium, Holland, Germany and Switzerland, and, if time permits, Scotland and Ireland. If my life be spared I shall return to America in season to resume my duties in the College at the commencement of the forth-coming lecture term.

I am very respectfully yours,

London, May 22, 1848.

ALDEN MARCH.

ILLUSTRATIONS OF CHRONIC RHEUMATISM AT SARATOGA SPRINGS.

[Concluded from page 397.]

CASE V. *General Rheumatism of the Joints and Intercostal Muscles, complicated with Glandular and Pulmonary Tuberculous Suppuration—Death.*

Mr. M. Stanley, aged about 45, came from Rome, N. Y., to Saratoga, in the spring of 1845, for the purpose of submitting himself to a prolonged use of our mineral springs. He brought his family, and remained here till his death. In addition to the use of the waters, many remedies of the common treatment were prescribed, with varied success. These need not be detailed minutely; but, for pathological reasons, I have thought it might be interesting to give a brief outline of the symptoms and progress of the disease, till its termination. The following are the notes taken at my first interview.

May 27th, 1845.—Been employed in the manufacture of flour; thin; pale. Did business uninterruptedly till 1840. Previously dyspeptic. That year had hæmoptysis. Health miserable from that period. Re-

linguished business October, 1844. The rheumatic disease commenced two years since in fingers, wrists, shoulders; the shoulders very painful; the wrists and ankles swelled, and remained permanently enlarged. Soles of the feet tender. So lame as to use crutches. About this time limbs became more free, and there occurred glandular suppuration in the neck, which continued copious for six weeks. The diseased action then attacked the intercostal muscles on the right side and front of the chest, manifesting itself by pain, aggravated by the movements of respiration, coughing, &c. The seat of pain was not larger than the size of a silver dollar, but was a matter of loud complaint, and his greatest difficulty. The flesh over this place was tender on pressure. Has very poor digestion, is obstinately costive, and has taken many cathartics. Has taken morphine. Is much emaciated. Countenance bilious, anæmic, scrofulous. General indications of breaking up. Pulse 100, small, hard. Mr. S. was never afterwards free from the pain from the intercostal muscles or their aponeuroses, and nearly a year before his death, which occurred January 5, 1848, there was discharged half a teacupful of pus by incision from this region. At the same time that pus was daily discharged from this place and from some of the enlarged joints, tuberculous consolidation was progressing in the lungs, purulent expectoration and hectic. The simultaneous discharge of pus from the chest, externally and internally, became a matter of deep interest to Messrs. Allen and Whitney, into whose hands he had fallen through my inability to attend patients in the winter, as well as to myself; and I was able to call sufficiently often to notice the progress of events. There was never any clear proof that the purulent expectoration *originated* from the external abscess, making its way through the pleura to the cavity of the chest, and thence into the lungs.

From evidences arising from auscultation, position of the patient, and the general assemblage of the symptoms, we decided, before death, that the two regions of suppuration were entirely distinct and disconnected. This diagnosis was exactly verified on dissection. The right lobe of the lungs was a mass of tubercles in all stages of progress, small cavernous ulcers, pus, and the usual appearance of tuberculous phthisis. The pleura was imperforate, and so were the intercostal muscles contiguous. The subcutaneous, and, perhaps, intermuscular cellular tissue outside of the ribs, was deluged with pus of the ordinary appearance. No more unequivocal instance has ever occurred in my practice, of the co-existence, for a long time, of two distinct, specific, characteristic diseases in the same individual, affording the 999th refutation of John Hunter's dogma of the incompatibility of diseases. For the past ten years I have seen enough of chronic rheumatism in this place; but this is the only instance of death, in my knowledge, where that disease bore so conspicuous a part. Mr. Stanley, himself, often deplored that his physicians had, in their early treatment, disregarded his scrofulous tendencies, giving him calomel, antimony, and other reducing remedies. The benefit he received, always, from zinc and ipecac. emetics, and warming, cordial laxatives, confirmed him in this opinion. He observed that his powers were

greatly curtailed, and never could be restored, after a mild salivation which occurred some years since. This is the only, the uniform report of patients in whom the serofulous diathesis is clearly developed.

CASE VI. Rheumatism of the Dura Mater and Theca Vertebralis.—Treatment, Congress water, baths, &c., interrupted by the patient's unwilling return home.

July 25th, 1846.—Mrs. C. E., from northern New York; say 22 years; sallow; pale. Two years ago last April had an attack of what was called intermittent fever, when her first infant was two weeks old. Confined to her bed. The fever "settled on the heart." Had violent palpitation, which yet exists. Cannot lie on left side. Pain in spine and head. Progressive emaciation of right arm and leg, which are losing strength. Ends of fingers and toes cold. Many blisters have been applied to the back. Two spinous processes tender in the upper lumbar vertebræ. Cannot write nor sew, on account of loss of muscular power.

Tongue furred; appetite very poor. Has taken no meat for three months; produces heartburn. Is flatulent; costive; menses regular but scanty. Was salivated fourteen days, two years ago. Little effect. Pulse now 110, quick, and of common hardness. Directions—Three half pints Congress, mornings; one of the Pavilion before dinner and tea; bath of mineral water every second day, at 100°.

July 31st.—Four or five evacuations daily; appetite better than for five months past; sleeps poorly; baths favorable. Profuse sweatings the night after bath. The right hip quite painful; walks better. Pulse 110, small, hard. Directions—A cold shower bath daily of two buckets; Pavilion Spring water. Omit the Pavilion water internally, on account of its tonic qualities, and confine her potations to the Congress. Electro-magnetism ten minutes daily; the positive pole to the neck, and negative to the feet.

August 3d.—More sensation; can feed herself better; no sweating nights, but is feverish, since cold showers. Has had gastrodynia. Pulse 112, small, wiry, hard. Directions—Take three grains calomel and three of blue mass every night; resume warm bath at 90°; continue Congress and electro-magnetism.

19th.—Goes to-morrow. Countenance and pulse improved; better every way; toes much warmer; instead of losing power daily, the right arm and leg are steadily improving; pain of the head and spine much diminished. Can eat meat once a-day without inconvenience; no burning nor flatulence; pulse 100 and soft.

In February, 1847, she wrote me that she had been steadily taking Congress water in bottles to that time; that, with the exception of two attacks, like fits, for which her physician bled her with good effect, she has been slowly improving ever since she came to Saratoga.

CASE VII. General Rheumatism—Disordered Digestion.—Treatment, Congress water, warming purgatives, hot baths, electro-magnetism.

August 6, 1846.—Mr. B. A., of Massachusetts; age 47; pale. For fifteen years dyspepsia and torpid liver. Last April became languid, weak

and dejected. In May, acute pain and rheumatism became developed in left ankle ; after a week, went to right hip and knee ; then left leg became feeble. Walks on two crutches. Diarrhœa ; tongue red ; appetite indifferent ; particular in his diet ; acidity ; rolling of wind in his stomach, distress, burning ; breath short ; uses tea and coffee ; mind inactive ; intestinal secretions wrong in smell and color ; left ankle inflexible ; pulse 66, feeble, unequal, and constantly intermitting ; has intermitted thirty years. Many years troubled with palpitations. For many years standing still produces faintness, and compels him to lie down. Fingers tender and painful. Directions—Compound senna mixture two ounces, and three half pints Congress water each morning. Four more tumblers during day. Bath for one hour of mineral water every second day, at 100°. Diet, principally meat and bread.

14th.—One or two evacuations daily ; stomach improved ; appetite good and food easy ; skin warm and moist ; baths do not weaken ; walks better ; hands the same ; pulse 72, and only one intermission in 36 beats. Directions—Five minutes electro-magnetism through joints of fingers. Continue the rest.

18th.—Always warm and comfortable from bath ; no dyspepsia ; good sleep ; pulse 66, good. Feelings of improved vigor. Directions—Compound origanum liniment to the foot and ankle. Fifteen minutes electro-magnetism daily. Continue the others, raising the bath to 104°.

21st.—Both legs diminished in size, and stronger ; pulse 72, soft, equal ; bowels loose ; effects of bath pleasant ; fatigued before hour is terminated. Gained eight pounds flesh. Directions—Continue and increase the power of battery.

24th.—Limbs worse. Has omitted the senna mixture lately. Directions—Continue Congress water, electro-magnetism, baths, and two to four Dean's pills.

28th.—Pills operated thoroughly. Swelling and pain much diminished ; walks anywhere without crutches ; likes the baths, half an hour at 106° ; attributes much to them. Directions—electro-magnetism twenty minutes daily ; bath 106°, every second day ; three Dean's pills at night. Congress in the morning.

September 5th.—Ankle has scarcely a vestige of the swelling ; walks two miles. Gained half pound flesh daily for four weeks. Continue all.

8th.—Walks three miles. Better in all respects ; goes soon. Is advised to keep his bowels just soluble with—R. Tinct. aloes and myrrh, elixir pro. ℞ $\frac{1}{2}$; ferr. ammoniacal, ens. veneris, 3 iij. Misco.

CASE VIII. *General Atonic Rheumatism.*—Treatment, Congress water, warming purgatives, baths.

Aug. 8th, 1844.—Mr. M. W. C., New York State ; age say 25. Well till last April, when a rheumatic pain commenced in the toe of the left foot ; a steady, throbbing pain. Then went to all the toes, ankle, knee, flesh back of sacrum, and that covering the tuber ischii. Hence, riding and sitting painful. A spot just commencing near elbow. The joint not enlarged. The pain obtuse. Cannot walk much from tenderness in the feet. The heels thickened, No trouble in the digestive process ;

slight flatulence; bowels regular; some hardness and distension of the epigastrium. Two or three tender spinous processes; pulse 112, soft. Directions—Bath 100°, every second day. Pavilion water internally, in repeated quantities, as an alterative and tonic. Two ounces of the mixture composed of equal parts comp. tinct. senna and syrup of rhubarb, each morning.

10th.—Bath very agreeable; back less painful; feet same; pulse 96. Go on.

12th.—Pulse 96, soft. Continue all.

15th.—Pulse 112 and soft; heels worse; better at stomach; countenance better; some griping. Directions—Zinc two grains, myrrh two grains—pills; take four a-day. Omit senna mixture. Continue the Pavilion Spring water freely.

17th.—The zinc pills nauseate. Directions—Twenty grains ipecac. at 6, P. M. Substitute Congress water, and take three tumblers in the morning and two more during day.

20th.—Severe nausea; vomited; better. Continue Congress and baths. In a depressed state of mind he left the next day, as many do, quite uncertain whether he had not lost all his trouble at Saratoga. In the following summer his mother was in my office, and stated that he went away discouraged, but his friends were astonished at his improvement on his reaching home, near the Hudson river. As soon as he was rested, he began to walk to his store. Within a week he dismissed one of the canes he had used constantly while here, and in six weeks forsook both. Soon resumed his commercial business in New York city and at home, and continued it all winter. Is as well as any young man, exposing himself freely to water, weather and hard-labor.

I dismiss this subject, by saying a few words on the discrepancies both in the phraseology and treatment of rheumatism. These discrepancies are notorious. But what definite idea occurs to the reader from the expression, acute rheumatism? inflammatory rheumatism? hot or cold rheumatism? And so of the treatment. Dr. James Johnson, of London, took unmeasured pains to protest against hot baths in this disease. Yet not a summer passes here without my prescribing scores of them, and with unmistakable success. The celebrated Professor Davis, of London, *never failed* of curing this disease with cinchona. During my miscellaneous practice, many years since, I occasionally used cinchona with the best effects; and now think it better than quinine, and next to sulphate of zinc in appropriate cases. It is true, also, that many patients have recovered rapidly under copious cold affusions, cold bathing, falling into winter streams, &c.

Now, with all these conflicting, ambiguous and perplexing views and statements in our medical literature, what is the young physician to do? How can he systematically order his treatment, and feel that he is in the right track? If he has established for himself a satisfactory theory and basis of practice, and can reconcile the current statements of authors so as to escape embarrassment in the discharge of his responsible duties,

he is hereby cautioned to take heed how he reads and what he reads, lest he fall into doubt and confusion.

But to those who have not yet satisfied themselves on this point, I hope to be pardoned for the immodesty of suggesting to them a system of diagnosis and treatment which has, for many years, appeared satisfactory to myself. Let them at once discard the terms *inflammatory*, *acute*, *hot*, *cold*. The questions are, what is the *present condition* of the patient? Has this specific inflammation fallen upon a person whose blood is fibrinous? Is there really increased heat in the joints? Are all the movements of the system strong and unbridled? Above all, is the pulse *hard*, *incompressible*, *wiry*, and not very frequent? Is the case *ATONIC* or *ENTONIC*?

I must acknowledge myself greatly attached to these last terms. Inflammatory rheumatism means nothing definite to me; and it has no correlative term. Nobody will aver that chronic is the correlative of inflammatory. Acute and chronic rheumatism are not correlative; and there is great confusion in the terms. But when we pronounce correctly, in whatever stage, that a disease is entonic, we know what to go about. So of atonic. If a man has been deterred by Galen's mischievous dogma—"pulsus res fallacissima"—from recurring to the pulse, connecting and comparing it with the whole pathological condition of the patient, as his very best guide in the treatment, he will scarcely appreciate the sincerity and earnestness of my remarks.

I speak of the pulse only as the leading guide. The heat of the flesh, color of the countenance, appearance of the blood, if drawn, habits of the patient, &c., are to be associated. I add the following classification of remedies, as a further auxiliary both to the diagnosis and treatment, and as a further illustration of the whole preceding remarks.

ENTONIC RHEUMATISM.		ATONIC RHEUMATISM.	
<i>Juvantia.</i>	<i>Sedentia.</i>	<i>Juvantia.</i>	<i>Sedentia.</i>
Venesection	Heating purgatives	Hot min'l baths	Bleeding
Calomel.	Compound tincture	Comp. tinct.	Salts
Salts and senna	of guaiac.	guaiac.	Cool dress
Antimony	Quinine	Quinine	Calomel
Colchicum as a	Cinchona	Cinchona	Tartar emetic
cathartic	Hot baths	Zinc	Cold showers
Cold affusion	Hot fomentations	Saratoga waters	Hydrophathy
Spare diet	Tonics	Opium	Cold rides
Hydrophathy	Meat diet	Flannels	Cold baths
Opium and calomel	Saratoga waters	Nutritious diet	Vegetable and
Cool regimen	Flannels	Hydriod. potas.	spare diet
Hydriodate of	Hot feather beds	Shampooing	Prolonged mus-
potass.	Shampooing	Hot formenta.	cular exertion

Saratoga Springs, June 1st, 1848.

M. L. NORTH.