3. It may prove useful also, as Dr. H. P. Bowditch, of Boston, suggested to us, in studying the supposed relation of the spleen to the secretion of trypsin.

One other observation is perhaps worthy of mention here. It relates to the behavior of milk in the alimentary canal. Though physiologists tacitly assume that the primary digestion of milk is gastric, Roberis has shown ("On the Digestive Ferments," p. 41) that "tryptic digestion of milk is rapid, and leaves only a slight residue, whereas peptic digestion is slow, and leaves a larger residue;" while Ewald ("Lectures on Digestion," p. 90) has proven that the pancreas, even in new born animals, is very active. Now, in this animal, milk, when fed alone, passes immediately and almost unchanged into the duodenum, where it appears mingled with bile and pancreatic secretion. If more extended observation shall show that the primary digestion of milk is wholly or in part tryptic rather than peptic, taking place in the duodenum rather than in the stomach, we have a physiological basis for a line of treatment clinically successful in certain digestive disorders of infancy, viz.: The exhibition of alkalies and drugs that, like ergot, nux vomica, etc., stimulate the unstriated muscular fiber. In such a case simple atony of the muscular walls of the stomach would seriously retard the process, even though the gastric secretion were perfectly normal. Moreover, one objection to the use of pancreatin, viz.: that it is destroyed in the stomach, is removed, if, when taken with milk or other fluids, it be rapidly passed into the duodenum.

BLOOD-LETTING AS A REMEDY IN THE TREATMENT OF ECLAMPSIA PUERPERALIS AND "ACUTE PNEUMONIA."

BY T. C. M'CULLOCH, M.D., OIL CITY, PA.

On the 2d day of July, 35 years ago, I was called to attend Mrs. John Carson, of Armstrong county, Pa., in labor with her third child.

She was a large, muscular woman about six feet in height and built in proportion. A short time before my arrival, she was delivered of a still born child. The womb was contracted, the afterbirth expelled. There was no hæmorrhage, and she was comfortably "put to bed." I say put to bed, as in those days women were nearly all delivered on the floor on their knees, and afterwards put to bed; apparently she was all right.

Whilst seated at the breakfast table enjoying my morning meal, after a seven mile ride, congratulating myself upon my "good luck," and easy made fee, I was startled by a scream from the nurse, followed by doctor! doctor! On entering her room, I found my patient in a *horrible* convulsion. I say "*horrible*," for what can be more horrible to the practitioner than a woman convulsed, distorted and blackened by a puerperal convulsion; muscles convulsed, features distorted; respiration gives forth a hissing sound, froth issues from between the clenched teeth, the eyes are rolled upward, and spasmodically jerked from side to side. Truly the condition of the patient is

"horrible" and well calculated to strike terror to the friends and alarm the doctor, especially if he is young and inexperienced.

At this period in medical therapeutics, there were but few remedies. Blood-letting, speedy delivery, and opiates in some form, were laid down as the essentials.

The room where the patient lay was small. The head and foot of the bed were wedged in between the wall and the partition, and as each proxysm occurred she actually shook the whole building. I bled this patient six times, once from both arms at the same time, allowing the blood to flow in full streams without regard to quantity. Her hair was cut off and cold applications applied to her head. She was cupped on the temples and back of the neck. She had twenty-three convulsions, occupying a period of twenty-four hours, during which time she was insensible. Her tongue was bitten, lips swollen, and face bloated, presenting an appearance unrecognizable to her friends.

Now, I think I hear the reader say, between the *doctor* and the *disease* she was a pretty well used up woman. But the convulsions ceased and she made a good recovery. She raised quite a large family. Had no return of the disease, but she was always bled once or twice prior to her confinements.

And let me say here that I believe I have prevented the occurrence of more cases of convulsions by timely blood-letting than I ever was called on to treat.

This lady afterwards gave birth to two sons who became prominent physicians—the oldest, Dr. Thomas Carson, who is at this time practicing in Saltsburg, Indiana County, Pa.; the other, the late Dr. John Carson, of Leechburg, Pa., who fell a martyr to his profession during a malignant epidemic of diphtheria, which prevailed in Armstrong county three winters ago. He died from a wound upon his hand, poisoned from the secretion while in the act of swabbing a child's throat.

This case of Mrs. Carson's I give as a typical case of the disease and the treatment thirty-five years ago.

Now, according to more recent views as to the cause, and the pathology of this disease, this was very bad treatment. Has the character of the disease changed? We know that the treatment has changed. But have there been any better results? Let us see. "I speak as to wise men, hear ye what I say." Upon looking over my Obstetrical Register, which I have kept faithfully from the first to the last case, noting all abnormal points in the labor, and writing out in full a history of all bad cases, I find I have seen fourteen cases of this disease, eight of which were patrons of my own; six I saw in consultation with other physicians. Of these eight cases seven were primipara. In one case I performed craniotomy; six were delivered by the forceps. But one, the case of Mrs. C., the child was born before the convulsions took place. All the cases were heroically bled, and all recovered but one.

My first case was in the summer of 1848, my last case was in the fall 1878—comprising a period of thirty years.

Now, this has been my experience with the lance, in combatting this formidable disease—eclampsia puerperalis, and I give it to the profession for just what it is worth and nothing more. You may say that such treatment is barbarous and belongs to the dark ages. I have heard men say so; medical gentlemen, too, who stand high in the profession; men whose hypodermic syringe never becomes rusty for want of use; men who never bled a patient in a practice of ten or fifteen years.

I heard a prominent practitioner not long since relate his experience with the lancet, which I think is too good to be lost. He said some ten years ago he had a case of chronic eczema which he was very anxious to cure. He gave him all the approved remedies. But the stubborn disease resisted all the treatment he could suggest. So he requested a consultation. An old physician was called for counsel, and after giving the old gentleman a history of the case and the remedies he had tried—which nearly exhausted the *materia medica*—the old gentleman remarked he thought the disease was caused by derangement of the *prima viæ*, and as all other remedies had been tried he would recommend blood-letting. The patient was bled, and he made a rapid and complete recovery—most unexpected result. "Well," said the Doctor, "I began to think there might be something in this 'bleeding business,' so I bought myself a lancet and waited for a case. It came in the form of acute pneumonia. I bled freely, and my patient died promptly. I laid away my lance, and I have never used it since;" remarking he had no faith in a remedy which produced such unexplainable and unexpected results. If it cured the case of chronic eczema, I think it killed the case of pneumonia.

Prof. Charles D. Meigs says in his work published in 1842, called "Philadelphia Practice," that he has met with seventeen cases of eclampsia. Few were first pregnancies. He says: "If there be a case of disease in which a bold and daring use of the lance is demanded, it is the case of the puerperal convulsion." He says: "The patient should lose from 30 to 60 ounces of blood at one venesection."

Dr. Ramsbotham says in his work on obstetrics, published in 1859: "Bleeding is our great reliance. The lancet is our sheet-anchor." All authors up to about this period agree with the two distinguished authors above quoted, and indeed every practitioner who had any claims to possessing a respectable knowledge of his profession looked upon venesection as the "*sine qua non*" in the treatment of this disease.

Now, I think I hear you laugh, and sneer, and say, "This is old-fogyism—behind the times." Well, I will admit that in the last twenty years there has been great advancement in the science of medicine. New lights have sprung up in the profession. Scientific men, with the aid of the microscope, have seen wonderful things, and by chemical analysis have demonstrated to the profession that "uræmic poison" is the cause of all the convulsions that the parturient woman is heir to. And upon this hypothesis quite a revolution has taken place. The American profession

especially have discarded the lance, and passed over to the new theory en-masse, and every pregnant female, who is suspected of furnishing a case of convulsions for the doctor, is requested to furnish a bottle of urine for examination and test. Albumen found is the harbinger of danger, and the physician is alarmed and anxious for the safety of his patient.

This brings to my mind a case I had some few years ago. I was called to attend a young lady in her first confinement. On entering her room I was struck with her appearance—face bloated so she could hardly see, complexion sallow, feet and hands swollen. I knew her when she was a girl, and I could not recognize her to be the same person. I inquired, "Have you any headache?"

"Yes, Doctor, I suffer a great deal with my head."

"Can you make much water?"

"No, not as much as I ought to make."

I made an examination, and found labor just commencing, which caused me to breathe a little easier. As I wanted time to prepare myself for the struggle, as I felt certain I was going to have a case of convulsions, I procured a bottle of her urine and went to my office. I applied the test, and found it highly albuminous. I was now fully convinced. I prepared myself with chloroform, hyd. of chloral, forceps, hypodermic syringe, etc., and awaited the call, which came the same night. On my arrival I found her in hard labor. Every time she turned up her eyes I thought sure she was going off in a convulsion, which made me anxious for her speedy delivery. I dare not bleed, for if I did and my patient died, and I was prosecuted for malpractice, the profession would not sustain me. They would swear she died from exhaustion from the loss of blood produced by the lance; so I resorted to the next best thing—speedy delivery, for all agree that if the woman was not pregnant she would have no convulsions.

Consequently with great difficulty I delivered with forceps a 12-lb. boy. Head squeezed; neck stretched; scalp bruised and tumefied, and to all appearance a dead child. But after some effort to resuscitate, I succeeded, but the child worked in convulsions for two days, caused, I have no doubt, by the abuse it received in hurrying it into the world. The mother got along without a bad symptom; on third day sat up in bed, washed and dressed her boy, and the fifth day I found her seated in a rocking-chair, bright, cheerful and happy. In this case, I got the convulsions in the wrong patient.

Dr. Playfair, in his late work of 1880, says, in speaking of the cause of eclampsia in pregnant women, "that in the more recent investigations as to the cause of death in this disease, the tendency of the profession for the last ten years is back to venesection." The rule is to bleed the patient as early as possible, so as to make a decided impression."

"As time elapses," says the same author, "the evidence accumulates to show that the relation between albuminuria and eclampsia in pregnant women is not so universal as formerly supposed; that albuminuria is by no means necessarily accompanied by eclampsia. Cases are abundant where the albumen ap-

pears after the convulsions, the convulsions causing the nephritis."

It is also an established fact that convulsive attacks are common in pregnant women when there are no traces of albumen found in the urine.

The same author says: "The key to the liability of pregnant women to convulsive attacks, is no doubt found in the peculiar excitability of the nervous system in pregnancy, a fact which was clearly pointed out by Dr. Tyler Smith and by many other authors. The nervous system is in this respect not unlike that of children, in whom the predominant influence and great excitability of the nervous system are well established facts, and in whom precisely similar convulsions are of common occurrence on the application of a sufficient exciting cause."

And who, I ask, would think of referring the eclampsia of childhood to "uræmic poison" as a cause?

Whatever may be the pathological condition of the blood, incident to the pregnant state; whatever may be the cause which excites the nervous system to morbid action; whether it be a toxæmic condition, or a watery condition associated or not with albuminuria, in either case says Drs. Franke and Rosenstein: "There is increased tension of the arterial system, which is produced by the hypertrophy of the heart, which is known to be a normal occurrence in pregnancy."

Such being the case, does it not stand to reason and common sense, which by the way are always associated, that venesection, as a remedy, stands first on the list, to relieve arterial tension, and the congested nervous center, by unloading the blood-vessels and subduing the heart's action.

But modern theuputists tell us "we can do that without the lance, which is barbarous in its application. We have *veratrum viride*, *aconite*, etc., powerful sedatives to the heart's action.

But the *mischief* will be done before you get the action of your drug. "Well, we have our hypodermic syringe loaded with morphia guarded by atropia, which acts quick and powerful." So it does upon the brain, but not upon the heart.

Where is the practitioner of experience who has not seen a narcotized patient, in which the heart's action was going on regular full and strong, but the brain overwhelmed, respiration ceased when it was very difficult to tell just when the patient died?

Opium, like chloroform, sometimes causes death from an ordinary dose judiciously administered—venesection never, to my knowledge. No one in these days of therapeutic knowledge would advocate the use of the lancet to the exclusion of other remedies. Chloroform, hyd. chloral, bromide of potash, etc., are all right and proper in their place and at the right time, and I should feel as if I had not done my whole duty should I fail to employ them; but I assert here that the practitioner who would stand by the bed-side of a parturient patient having convulsions or the premonitory symptoms of eclampsia, having pain in the head, double or half vision, swollen hands and feet, with turned eye-lids, with a full and bounding pulse, and he failed to extract blood freely and the patient died, and he was prosecuted for malpractice, were I

on the jury I would vote for conviction, albumen or no albumen in the urine; and nothing but Bright's disease of the kidneys, in her case being a well-established fact, would cause me to recommend him to the mercy of the court.

It is time medical men should think and be actuated by common sense, and not ride the hobbies of others all their life. I would rather have "three ounces of common sense," exercised at the bedside of a patient, than "ten pounds of finely-spun theory." The former makes a man act wise—the latter makes a man appear wise, but it is argued that the remedy was abused; every person who was sick was bled. Admitting this to be true, it is no argument why it should be abandoned altogether, and not used in its proper place.

Do not the present generation of doctors abuse their patients by their "anti-exhaustive treatment," and by their stimulating, brandy and milk course do more harm than ever the lance did? Why, thousands of patients at the present day, after a protracted illness, come out of the hands of the doctor confirmed inebriates, fit only for bar-room loafers.

Women in former days were bled for headache, backache, pains real or imaginary, and they grew fat, raised large families of healthy children, and lived to a ripe old age.

But in our day the hypodermic syringe has taken the place of the lance, and for their pains and aches they are chucked full of morphia daily. Sensibility deadened, nervous system unstrung, muscular system relaxed, and they become fit subjects of abortion or premature labor. Their children dwarfed and they die at a premature age.

Would it not be better if we would follow more the teachings of nature on this subject? Why, one half of the human family, and the best half at that, by a fixed law of nature, which is God's law, lose from six to ten ounces of blood monthly, and continue to average so for 30 years, being bled not less than 360 to 400 times in their life, for what purpose? To carry off the surplus blood, like a safety valve, to relieve their congested organs.

And yet if a man has double pneumonia, lungs congested and pressed upon with a pressure of 100 pounds to the square inch, breathing 60 times to the minute, you are afraid to take a pint of blood from him for fear he dies from exhaustion, and you chuck him full of quinine, iron, brandy and milk to support him, and morphia to relieve his pain; and your man dies and you console yourself by the reflection that you gave him the best chance for his life by using the latest and best treatment approved by the profession.

I have, in a continuous practice of over 35 years met with some cases of pneumonia, and I never had a case of primary inflammation of the lung in the adult but I bled freely in the congestive stage, and although I say it myself, it was very rarely that they did not recover rapidly after one or two decided venesections.

I had an attack myself in the spring of 1858 of acute pneumonia of the left lung. I was bled twice from the arm, cupped and blistered, and I made a speedy

and good recovery. I can remember what a load was taken off my chest at the first bleeding; how the pain ceased; and how easily I breathed; and with a full dose of morphia how well I slept that night. In the last few years, since bleeding as a remedy has been abandoned, nearly all the cases I have seen have been in consultation with other physicians, and the great majority of them were very bad subjects, men who were broken down by strong drink. I saw them in the advanced stage, when the time for bleeding had gone by, if at all admissible in such subjects—seven in number. They all died promptly, full of morphine, quinine, iron, brandy and milk.

Dr. John L. Atlee, our retiring president, in his address to the members of the American Medical Association, at Cleveland, June 5, last, said: "I feel well assured that the almost total disuse of the lance has cost *many valuable lives*. From a very large experience in its use I am satisfied, *fully satisfied*, that if we depended more on the early use of the lance, in the congestive and inflammatory states of many diseases our practice would be made more successful than it now is. It is, in my opinion, a very important subject, and I feel assured that ere long the lancet will be more freely used than it is now." When I heard these words fall from his venerable lips, an old veteran in the profession, brim full of knowledge and wisdom gathered from scientific researches and an experience of 60 years of active practice in the profession, although not a Methodist, I could scarcely restrain myself from shouting Amen!

Dr. Davis, of Chicago, says there was during the year 1882, as per the census of 1880, one death in the city of Boston to every 532 of the population; 1 to every 579 in Chicago; 1 to every 441 in San Francisco; 1 to every 1,088 in New Orleans. He says sanitarians should investigate the cause, and suggest some means of checking this fearful mortality. Certainly this is good advice, and upon the principle that "an ounce of prevention is worth a pound of cure," it is well-timed. But I say to you, fellow practitioners, clean up your old rusty lancet, and you that have none buy one; carry it with you to the bedside of the sick, and when you meet an enemy so formidable as eclampsia or pneumonia, stand in the advance guard, strike with your lance one or two decisive blows in the onset of the conflict, and it will do more toward subduing the enemy than all the stimulating nourishing treatment of the present day. "Quit yourselves like men."

MEDICAL PROGRESS.

THE PHYSIOLOGICAL EFFECTS OF COFFEE.—DR. J. A. FOOT, of Rio de Janeiro. (*Bull. Gen. de Therap.* June 30.) Dr. Foot gives us the effects of a strong dose of coffee upon his own person after recording his condition for fifteen days of total abstinence from coffee, and follows his record of the effects of the strong dose, by noting the influence of two cups of coffee daily for twenty-five days. The most interesting part of his paper is his record of the effects of

the strong dose. At the time of taking it, his pulse was seventy-two in the morning, reaching eighty-four during the day. He made an infusion of over 3viij of coffee in a quart of boiling water, drinking the whole of it during the day from 7 A. M. to 9 P. M. During that day the pulse increased in rapidity to 108 in the afternoon, in the evening it reached 114. He went to bed at 11 P. M., but could not sleep, reflex contractions were produced in nearly every part of the body alternately. Very painful cramps in the thighs, legs, feet, walls of the thorax and in the muscles of the hyoid region. These cramps persisted throughout the night, but moderated in severity on the following morning. The tongue was dry and there was a certain degree of constriction in the chest. At the same time there were frequent cramps in the stomach accompanied with nausea. The intestines were the seat of frequent borborygmus, and of an abundant liquid secretion which produced eighteen evacuations. The pulse kept between 110 and 112 through the night. It was intermittent, as was the heart's action, losing one pulsation to every four. The next day the pulse was seventy-six, there was headache and no appetite.

In this experiment, then, the coffee acted on the organs and functions of the central cerebro-spinal system, producing insomnia by exciting the brain, producing the cramps in the muscles, pains in the stomach, disturbance of the intestine and of the heart by exciting the spinal cord, an excitation of the reflex force or excito-motor. He considers that this irritation affects equally the spinal roots of the sympathetic, and in paralyzing the vaso-motor nerves. In this way explanation is given of the cause of the excessive secretion from the intestine and of the abolition of sexual power.

His other experiments with moderate doses, prove to his satisfaction, that the use of coffee does not prevent advanced age and the preservation of good health; and that life seems to be prolonged in the countries where coffee is much used.

AMAUROSIS FROM TUMOR IN THE NASAL CAVITY CURED BY REMOVAL OF THE TUMOR. PRIESTLY SMITH. (*Ophthalmic Review*, June, 1883.)—The salient points in the case detailed are that a morbid growth in the nasal cavity caused impairment of sight in both eyes, unaccompanied for a long while by any visible changes in the optic disks, and that the removal of the growth was followed by complete and permanent restoration of sight in one eye. There can be little doubt that the tumor was a non-malignant growth of some kind, as it was completely removed, and there was no recurrence at the end of six years. The seat of the pressure is inferred from the symptoms to have been in front of the optic commissure—for there was no hemiopia, one eye being blinded completely and the other recovered with an entire visual field. It was not within the orbital cavities, for there was no protopsis and no sign of pressure upon the nerves or blood-vessels which enter the orbit in the neighborhood of the optic nerve. There must have been an invasion of the sphenoid cells by the tumor with a destruction of the septum,