a diuretic action on the kidneys, that it passes off in the urine almost immediately after it has entered the circulation.

I told you just now, that when you submit a portion of starch to the action of saliva and heat, it is converted into sugar, there being some substance in saliva which has the power of producing this change. This is exactly what takes place in the natural transformation which occurs to the starch of seeds, converting that into sugar, and in this instance, the body which produces it has been isolated, and to it the name "*diastase*" has been applied.

A question here suggests itself, is there in this disease, any animal diastase generated either in the saliva, gastric juice, or pancreatic secretion? Or, according to the view lately proposed by Mialhe, is the substance (the diastase,) already existing in healthy saliva, and which we have seen can convert starch into sugar, increased to an abnormal degree? Whichever of these is the explanation, there can certainly be no doubt but that the saliva is in an unhealthy condition, for in each of the three cases which we have investigated to day you will remember the saliva was strongly acid, and this is the case almost uniformly in diabetes. Now, this constantly acid state of the saliva, is an unnatural condition of that fluid, for it generally causes an alkaline reaction or is neutral during health.

The locality at which the change of starch into sugar is effected, is undoubtedly, in great part at least, the stomach, but I do not believe that the secretion of that organ has any effect in producing the change. Tiedemann and Gmelin, also Dr. Prout, have thought that the gastric juice has this property, but it has since been proved by experiment that no such effect can be caused, for by digesting starch with gastric juice, at a temperature of 100° Fahrenheit, no sugar is generated. Gastric fluid has the power of digesting the albuminous portion of food, but its effect on the amylaceous is simply maceration. Indeed it seems most probable that amylaceous matters are only digested by the saliva and the secretion of the pancreas, which is, in fact, only a large salivary gland.

It has been shown by Bouchardat and Sandras, and I have repeated their experiments, that the fluid secreted by the pancreas has the property, like saliva, of converting starch into sugar; and Bouchardat holds that in diabetes not only have the pancreatic fluid and saliva this animal diastase, as in health, but that the gastric juice likewise contains it, and that the sugar is produced directly from the food by its action upon the amylaceous portion; and he believes that if the patients be prevented from taking amylaceous food, the formation of sugar will be suspended. Upon this view of the subject Bouchardat founds his mode of treatment by regulating the patient's diet, and denying them all vegetable food; and so successful has this plan been in his hands, that he tells us that of forty-one cases, the following were the results:—

16 cured.

14 relieved.

11 died from phthisis.

This, however, is, I apprehend, far greater encourage-

ment than we meet with in this country, even from a similar mode of treatment.

In another lecture I shall examine these points a little further, and discuss the various modes of treatment of this disease.

PUERPERAL FEVER;

IN WHAT WAY IT MAY ORIGINATE FROM ERYSIPELAS,
AND HOW COMMUNICABLE.

By R. U. WEST, Surgeon, Hogsthorpe, Lincolnshire.

The following cases, which are corroborative of the opinion that puerperal fever may originate from attendance on erysipelatous patients, and that a malady so originating is communicable from one puerperal woman to another, are also suggestive of other conclusions on this painful subject, which are, I think, of some practical importance.

On the 6th of January, 1842, I was called in to attend an elderly gentleman in this village, who had erysipelas of the face. As yet his symptoms were not at all urgent; it appeared to be quite a slight and common case. I sent some saline medicine, and a lotion. The same evening I attended a case of midwifery, two miles from my residence. The next morning, before visiting my erysipelatous patient, I attended a second case of midwifery, four miles from my residence. On my return home, I found my patient considerably worse; I applied nitrate of silver freely all over the affected part. At one or two o'clock in the morning of the next day, January 8th, I was called up to him. He was much worse; face and head frightfully swollen down to the shoulders on both sides. After visiting him again the some morning at nine o'clock, I called upon both my lying-in patients. They were doing well, and in fact recovered without a single bad symptom. In the evening I found the old gentleman in a very bad way; there was some delirium, and the head and face were still more swollen. I made a few punctures in both cheeks, and while busy with him was sent for in all haste to attend a case of midwifery,—Mrs. T. T., of L—, a distance of three miles. I believe I went without washing my hands. I was not detained more than a couple of hours, and as I was riding homewards, I was met by my groom, who had been sent to me with the announcement that an alarming change had taken place with my erysipelatous patient. I hastened on, and found him comatose, with a dusky livid appearance of the face. He died in the course of the night, a frightful spectacle.

And now commenced my troubles. In the night of the 9th of January, or rather early in the morning of the 10th, I was again summoned to Mrs. T. T. I found her in the following state:—Very severe pain, aggravated in paroxysms, like after-pains; some abdominal tenderness; had had a shivering fit; some headache; no anxiety of countenance; pulse 120, soft and full; skin hot; diaphoresis; lochia abundant; no signs of milk, but as it was barely thirty hours after delivery, it was quite early enough for that. I ordered

fomentations, and sent some doses of Dover's powder in a saline mixture. Eight hours after, pulse 100; felt much better. Sent her an opening powder,—calomel and rhubarb.

January 11th. Pulse 112; more pain again, with tenderness; *complained much of pain and heat of the vulva.* Ordered eight leeches to the abdomen, and four to the vulva, and gave her a grain of calomel and three grains of Dover's powder with saline mixture every four hours.

12th. Tenderness increased; abdomen tympanitic; pulse 130, smaller, but not sharp; some anxiety; lochia still abundant; no milk; tongue white and slimy. I proposed venesection, but finding the husband inclined to be dissatisfied, I made him fetch my friend Dr. Barker, of Spilsby, with whose sanction I bled the patient. The medicines were continued.

13th. Pulse below 100; pain better; abdomen very full; did not pass sufficient water.

She continued to improve till January 16th, though very nervous and timid, and on that account giving a good deal of trouble, but in the evening of that day I found it necessary to pass the catheter, which had to be repeated once or twice a day until the 26th, when the retention, after resisting various medicines, such as Tinctura Lyttæ, strychnine, mucilage with Liquor Potassæ, &c., yielded at once to the Tinctura Ferri Murialis, in doses of fifteen drops every four hours. The pulse never got above 100 after the venesection. She continued weakly for about a month.

On the 15th of January, at one o'clock in the morning, I attended a case of midwifery in a village about six miles from my residence. The woman had "got it over" before my arrival; I had not even occasion to remove the placenta. I, however, felt her pulse, of course, besides ascertaining by pressing the abdomen, that the uterus was safely contracted, which I never omit to do before leaving a lying-in woman.

On the 17th I called upon this patient again, after having in the morning passed the catheter for Mrs. T. T. She was getting on well, and recovered without the occurrence of a single unpleasant symptom.

In the evening of the 16th of January, immediately after my return home from a visit to Mrs. T. T., on which occasion, be it remembered, I had been obliged to use the catheter, I was summoned to attend Mrs. R. B., of C., about a mile from my residence. I was with her about an hour before she was delivered; it was her fourth child, and her labour was easier and quicker than common.

On the 18th, in the morning, being about thirty-six hours after her delivery, I was again summoned to this patient. She was suffering very severely from constant pain in the abdomen, aggravated in paroxysms, (which I have generally found to be the case in *puerperal* peritonitis;) there was very considerable tenderness on pressure; pain in the forehead; pulse 130, small and sharp; respiration hurried; countenance flushed and anxious; restlessness; lochial discharge slight; bowels confined; some nausea; tongue white; skin hot; could not find that she had had any rigors. I bled her in

the arm immediately, after which the pulse dropped to 100, and the pain was somewhat abated. Sent an opening powder, and some fever medicine.

When I called in the evening the aperient had not acted; the pain had returned as bad as ever, the tenderness being excessive; pulse 130, as at first. I took some more blood from the arm, and gave her an enema, which brought away some scybala. The pains were now materially relieved, though the pulse did not drop this time. Sent an opening mixture, with Magn. Sulph. and Tinct. Hyoscyami.

19th. Felt better; purged two or three times; no return of paroxysmal pains; tenderness still remaining; pulse 130. The milk had appeared in the breasts, which I looked upon as favourable.

20th. Complete retention of urine, causing pain and tenderness again. Passed the catheter, which gave great relief. In other respects better.

21st. No water passed since the catheter was used at noon the day before, catheterism therefore necessary both morning and evening; there was still *malaise* though the symptoms were apparently less urgent; there was still pain, with abdominal tenderness; and the pulse was never below 130. I therefore this day gave calomel and opium in pills, and applied a dozen leeches to the abdomen.

The next morning, January 22nd, the catheter was not needed; there was some tendency to diarrhoea, and she had a severe rigor. I found all the symptoms aggravated. Any further depletion I could not venture upon; on the contrary, I sent some aromatic confection, continuing the calomel.

I saw her twice or three times on this day. I was called up the next night, and finding the result likely to be fatal, persuaded the husband to fetch Dr. Barker. By the time he arrived, in the course of the morning of the 23rd, the poor woman was beginning to be typhoid; she had been at times delirious; there was tympanitic distension of the abdomen, with other untoward symptoms. We gave carbonate of ammonia, to which was added wine the next day.

On the 25th she was quite typhoid; black tongue; subsultus tendinum distressingly frequent; hiccup, &c.; and in the evening of the same day she sank. A constipated state of the bowels in the first instance seemed to complicate the disease unfavourably. There were some scybala voided even on the 23rd. The milk continued in the breasts to the last; its appearance, therefore, in this disease, is not critical.

Dr. Barker and I discussed the matter most anxiously while he was with me on the 23rd, and although we were both of us quite unconscious that the case of erysipelas had had anything to do with the puerperal affection, we felt compelled to the decision that Mrs. R. B.'s case was genuine malignant puerperal fever, and that as it had probably been communicated from Mrs. T. T., my only safe course to prevent its further spread would be to discontinue attending midwifery for a time. I therefore at once sent for a substitute. But before his arrival (I had 23 miles to send,) I was obliged to attend another midwifery case. Oh! how anxious I was. I changed all my clothes before going; washed

my hands in several waters, with solution of chloride of lime, and although I delivered the woman, I was careful to make as few examinations as possible. This case, it will be understood was attended on the 23rd of January. The woman had some slight symptoms of peritonitis on the 25th; her pulse was very frequent, and there was severe pain with some tenderness. She had some saline aperient medicine, with fomentations, and did well.

As soon as I could be released from my attendance on Mrs. T. T.,—for I did not think it prudent to allow my substitute to pass the catheter for her,—I went into Leicestershire for a fortnight. I am happy to say that I have not seen a case of malignant puerperal fever since, though I have, as may be supposed, seen several cases of simple peritonitis.

I may be allowed to observe upon the above accurate detail of facts, that if it be conceded that my attendance on the case of erysipelas was the cause of this formidable malady getting into my practice, which, painful as the thought may be, I think was the case, it seems probable:—

First. That as the cases attended on the 6th and 7th of January, recovered without the appearance of any unfavourable symptoms, a form of erysipelas, which may subsequently in its *malignant* and almost *putrid* stage originate puerperal fever, will not do so in its *early* stage.

Secondly. That as the disease did not come on in the the same patients, notwithstanding my visiting them after attending the erysipelatous case when the symptoms had become formidable, the merely taking a lying-in woman by the hand will not originate the disease.

Thirdly. That as the woman attended on the 15th of January recovered without any symptoms of the malady, although I might at the time, be supposed to be tainted with both the erysipelas and the puerperal disease of Mrs. T. T., it requires something more than a mere visit to a parturient woman to communicate the disease from one puerperal patient to another.*

Fourthly. That, bearing in mind the above suppositions, the circumstances immediately preceding and accompanying the attendances on both Mrs. T. T. and Mrs. R. B., go to prove that it requires actual contact of the accoucheur's infected hand with the mucous membrane of the vagina, both to originate and communicate the disease. (Query—would not the heat and pain of the vulva in the first case confirm or strengthen this supposition?)

Fifthly. That the slight manner in which the disease appeared in the woman attended on the 23rd, (notwithstanding I was still passing the catheter daily for Mrs. T. T., and had but just returned from a visit to Mrs. R. B., the latter being at the time almost typhoid,)

would serve to prove that ablation, change of clothes, chlorides, &c., are of some little avail.

Sixthly. That erysipelas may originate a *mild* form of puerperal fever, which may in its turn communicate a *more malignant* form. (In the two cases here alluded to, the symptoms in the commencement were nearly the same, the occurrence of dysuria in them both being somewhat remarkable; the fatal difference was in their terminations,—typhus and death in the one, gradual recovery in the other.)

And, *lastly*, that a puerperal fever, originating from a case of erysipelas, is not necessarily fatal.

I offer the above remarks with considerable diffidence. The facts I have detailed may be relied on, and I leave the reader to found upon them what conclusions he may please.

Hogsthorpe, Lincolnshire,

February 12, 1848.

CASE OF OVARIAN DISEASE.

By GEORGE KENNION, M.D., Harrogate.

I was consulted by Mrs. W., the housekeeper in a family in this neighbourhood, a single woman, aged 34, on account of a large abdominal tumour, which she had first perceived about two years previously, and which had gradually increased up to the present time, her size being that of a woman in the eighth month of pregnancy. There was little difficulty in ascertaining that this tumour was a large ovarian cyst, apparently unilocular. The catamenia had been absent for two years, but in every other respect her health was perfectly good. As her case seemed appropriate for the operation of tapping, I advised her to have this operation performed, but to postpone it as long as she could possibly do so.

On the 15th of September I was requested to see her again, and found that the cyst had greatly increased in size. The abdominal parietes were exceedingly tense and thin, and she could neither walk, sit, nor lie down without the greatest discomfort, I therefore decided that the operation should be no longer postponed, and it was accordingly performed upon the 18th, with much tact, by my friend Mr. Beaumont, the usual attendant of the family. The fluid was of an oily consistence; the colour was remarkable, being almost as red as blood. Mrs. W. bore the operation (which was rendered more complicated by the presence of a second and smaller sac, which we could not detect until after the removal of the fluid from the principal sac,) exceedingly well; and, although we were not satisfied with the character of the fluid which was withdrawn, there was no reason to apprehend any untoward result.

I was sent for to see her with Mr. Beaumont upon the evening of the 22nd, and found her with an exceedingly quick and weak thready pulse, an anxious haggard expression, constant jactitation, and complete anorexia. There had been no rigor. She had no pain

* From what Dr. Blundell says in his lectures, (*vide Lancet*, for August, 30th, 1828, page 677,) he appears to think a mere visit dangerous.