

goes in the lungs, by the fact of the colour of the blood becoming darker when it absorbs carbonic acid, and he says that he has observed venous blood become of lighter tint in proportion as the carbonic acid was abstracted from it by a current of hydrogen. These results are in accordance with those of Engelhart and Stevens.—*Journ. de Pharm.*, Dec. 1837.

4. *Experiments on the Spermatic Animalculæ, and on some of the causes of Sterility in Women.*—The following highly interesting observations on this subject were communicated, a short time since, to the Royal Academy of Sciences of France, by M. DONNÉ.

The spermatic animalcules (*zoospermes*) have been submitted to numerous examinations since the days of Lewenhœck, who was the first to describe them with any degree of accuracy; but hitherto little progress has been made in the discovery of their natural history, or of the part which they perform in fecundation.

M. Donn  has studied them in a new point of view. He placed them in contact with the principal fluids of the body, for the purpose of watching the effects of these fluids on their vitality, and general phenomena.

By following out this train of enquiry, he has been led to conjecture that certain changes in the properties of the mucus of the vagina and of the uterus may exercise a deleterious influence on the animalculæ of the male semen, and may thus as effectually prevent impregnation, as if there was a radical defect in the female organs of generation.

In this point of view, we perceive that some light may possibly be thrown on the hitherto most obscure subject of *sterility*.

M. Donn  commenced his researches by examining the effects of the blood itself, of milk, of the healthy vaginal and uterine mucus, of the purulent discharge in syphilis and in gonorrhœa, of the saliva, and of the urine on the spermatic animalculæ. He found that they continued to move and live in some of these fluids; while in others they immediately perished.

Thus blood, milk, and pus did not seem to have any visible effect upon them; but the urine and the saliva appeared to kill them at once. The mucus of the vagina and of the uterus was, as might be expected, perfectly innocuous; even the presence in it of new infusoria—which have been discovered by M. Donn  in certain vaginal discharges, and to which he has given the name of *trico-monas*—did not appear to affect the spermatic animalculæ.

There are some cases, however, in which the vaginal and uterine mucus has a noxious influence. The investigation of this point constitutes the most important theme in M. Donn 's memoir. He has found, we are told, that the mucus of the vagina in some women, apparently in perfect health, is such that the spermatic animalculæ perish immediately in it.

This noxious quality belongs sometimes to the vaginal, at other times to the uterine mucus. Having satisfied himself of this fact, he next enquired whether the mucus exhibited any appreciable changes of quality from its normal properties and condition; and he thinks that he has succeeded in discovering certain traces of such changes in the chemical constitution of the secretion.

He says that the mucus of the vagina, from the vulva to the os tinc , is always *acid*, whereas that of the cervix and body of the uterus is always *alkaline*.(!) Now he supposes that in certain habits and in certain states of the system, there is a disposition to excess of acidity in the one fluid, and to an excess of alkalinity in the other. The probability of these novel ideas rests upon the results of several experiments, which M. Donn  has lately performed.

The second part of M. Donn 's Memoir is occupied with the investigation of involuntary seminal discharges. This subject has been recently examined by M. Lallemand of Montpellier; but his work is rather of a practical than of a physiological nature.

The chief object of our author's researches has been to discover, if possible, some sure diagnostic signs, by which the presence of seminal matter may be recognised in the urine. He has very satisfactorily shewn that the signs, which the Montpellier professor has pointed out for this purpose, are quite nugatory. The chief of these are the thick and troubled state of the urine, its sickening fetid

odour, a cloudy flakiness through it, and a glairy filamentous and greenish-coloured deposit adhering to the bottom of the vessel.

Now all these characters may exist in urine, which has no admixture of seminal fluid; and, on the contrary, spermatie animalculæ have been detected by the microscope in urine, which was quite limpid and transparent, or perhaps only slightly mucous.

It is by the use of the microscope alone that we can hope to discover the presence of the seminal fluid; and this mode of diagnosis is the more satisfactory, as it seems that the characteristic form of its animalculæ is not at all altered by the action of the urine. As their specific gravity is greater than that of the urine, they always fall to the bottom of the vessel; and thus the smallest quantity of semen is readily discovered.

To remove all source of ambiguity, M. Donné has made several experiments to ascertain whether there is ever semen present in the urine, when the person is in perfect health, and has no symptom whatsoever of seminal weakness.

He thinks that he has quite satisfied himself that such is never the case in health, unless, indeed, there has been an emission shortly before the urine was discharged; for under these circumstances there are always some animalculæ discoverable, according to his researches. With the exception of such a case, he has never detected them in the urine of a person in health; and he therefore points out the great importance of attending to this symptom—the existence of spermatie animalculæ in the ordinary urine—before the disease has made much progress.

The memoir concludes with the reports of several cases, in which the existence of seminal weakness was suspected, and where M. Donné was requested to examine the urine with the microscope. In some the presence of the spermatie animalculæ was readily discoverable; while in others the suspicion was proved to be groundless.

In closing these brief remarks, we cannot too urgently impress on the attention of medical men the very high importance of using the microscope more frequently, than they have done hitherto, in examining the products, healthy as well as morbid, of animal life. In conjunction with the valuable assistance of chemistry, this simple instrument promises to reveal many of the mysteries of life and of its wonder-working operations.—*Med. Chirurg. Rev. from Gaz. Méd. de Paris.*

5. *A new mode of increasing the Heart's action for restoring the powers of life in persons apparently dead from drowning, or syncope.* By JOHN HYSLOP, Esq.—Some years ago, I had occasion to bleed a lady, and abstracted upwards of thirty ounces of blood, whilst she was in bed. About three hours afterwards, on attempting to rise she fainted. The family being in great alarm, I was sent for, and when I got to the bedside, I found that another practitioner was in attendance. He said to me, "your patient is dead." The basin of blood remained still on the table, and I was in great uneasiness on account of the lady's condition, and I confess I also dreaded the effect of the largeness of the bleeding. Spirits of ammonia had been sent for, but deglutition was suspended; a flexible tube was sent for, and I became very much alarmed.

In this state of anxiety of mind, and without having any precise purpose in view at the time, I desired her husband, who was almost frantic, to assist me in raising up her head and shoulders from this supine position. She gradually resuscitated, and in three or four minutes she became quite revived. I again visited her late at night, when she said she had great pain in her arms, and she thought that her husband and I had grasped her arms too tightly. On returning home and reflecting on the circumstances of this case, I concluded that pressure (quite unintentional, however,) on the brachial arteries, by impeding the circulation and causing congestion, must have excited the action of the heart.

On making the experiment, I found, that by pressing the brachial artery, the pulse, though it gradually beat faster and faster, continued still small and thready, and when the pressure was removed, it became very full and continued so for some time.

I can at any time raise the pulse in this way. On repeated trials, I find that the pulse being first felt so as to ascertain the progress of the pressure, it runs nearly thus:—