

woman in labour. I found the gentleman (a muscular and stout man) lying on his back in bed, with his legs drawn up, in excruciating agony; I took hold of his hand, which was extended, it was quite cold; his pulse was scarcely perceptible, very small and quick, and his countenance exhibited great distress. On seeing me he exclaimed "spasms, doctor, spasms; I never had them so bad before, but I have seen my brother quite as bad." I expressed a hope that he would soon be relieved, and begged him to be more quiet. I placed my hand upon the bowels, they were soft and yielding, and he did not complain of increased pain until the pressure was tolerably firm, when his expression was, "doctor, I cannot bear it." I administered some hot brandy and water, and ordered hot fomentations with flannel to the feet (which were very cold), and all over the stomach and bowels. They were assiduously applied for some hours. Having no other medicine in the house, I gave him some castor oil in brandy and water. In the course of a quarter of an hour vomiting came on, and continued severely for hours. The pain, however, beginning gradually to abate, and his pulse to improve, I left him to fetch some medicine, and an enema-syringe. On arriving again at the house I found his usual medical attendant, Mr. Wright, had arrived, when, after a short consultation, the following plan was determined upon:—R Calomel, six grains; opium, three grains. To be taken immediately. Carbonate of ammonia, five grains; sulphate of magnesia, two drachms; carbonate of magnesia, ten grains; mint-water, ten drachms. Mix for a draught, to be taken every hour. A large emollient glyster was thrown up the rectum with a syringe, and the fomentations continued; he took three doses of the medicine, and two injections were thrown up, which procured two small stools at about eleven o'clock, a.m.; the sickness and pain continued, though relieved; he passed urine once. I then left him, having agreed with Mr. Wright upon the following medicine, he remaining in the house:—R Calomel, six grains; opium, four grains; compound extract of colocynth, ten grains. For four pills, one every third hour. R Sulphate of magnesia, six drachms; compound infusion of roses, six ounces; essential oil of peppermint, ten minims. For a mixture, one-fourth of which to be taken after each pill. Repeat the enema if necessary. He took two doses of this medicine without vomiting; his pulse improved, and his countenance became more placid. He had another evacuation, but was still not free from pain; he seemed inclined to doze, and Mr. Wright left him a little before three o'clock. After awhile he requested to be raised up a little; he sat up in bed for a minute or two, and fell back apparently in a fainting fit; this caused alarm; I was immediately sent for again, and saw him at about half-past four o'clock, p.m.; he was in a complete state of collapse, still in pain; his cries were feeble; sickness followed everything he took, even a spoonful or two of gruel; he was sensible when spoken loudly to, and knew every body about him; his extremities were as cold as marble; his pulse faltering, though scarcely perceptible; his breathing quite spasmodic, his chest and throat heaving at every respiration. Heat and stimulants were in vain tried. A retired physician, Dr. Kennedy, residing in the neighbourhood, was sent for; he arrived a few minutes before death, which took place at six o'clock, p.m.

This gentleman was aged forty-two, of a phlegmatic temperament, had been the subject of repeated attacks of spasm, which usually left a yellow skin and an exhausted system. His wife informs me that he went to bed on the night of his attack as well as usual, and awoke out of a sound sleep at half-past three o'clock, in excruciating agony; a considerable quantity of stimulus had been given before I arrived, and hot flannels applied; it was a very dark morning, and a severe storm, with thunder and lightning, occurred at the time, and during a vivid flash his countenance was exhibited to his wife as most agonising, such as she had never witnessed, and seemed almost to banish every probability of recovery. As every branch of this gentleman's family (being ten in number) are subject to similar attacks, and the father having died in one, I suggested the propriety of a post-mortem examination, which was acceded to; this took

place on the following evening, twenty-four hours after death, and myself being present.

The body presented decided marks of decomposition, livid patches, emphysema, &c.; the belly was very much distended. On opening the abdomen in the usual way, the quantity of gas which escaped was greater and more offensive than I ever experienced; from a quart to three pints of bloody serum were taken out. The omentum was fatty, and tinged with red spots or points. The liver was about the usual size, but firmer than usual; the edges rounded and thickened; it was loaded with black blood. The gall-bladder was nearly full of a dark-coloured thick bile, and contained *ninety-eight* gall-stones; fifteen or sixteen were about the size of horse-beans; the others that of peas downwards; the smallest weighed two grains and a half,—a considerable quantity of sand, nuclei for one hundred more; on tracing the duct there was no stone to be found, nor could one be detected along the whole line of the intestinal canal. The spleen was large, and gorged with blood. The small intestines were slightly injected with arterial blood, and in three distinct places, for the space of an inch or two, a contracted and apparently withered state of gut was singularly marked, and of a deep colour. The kidneys were rather small and flabby, almost spongy; and in cutting into them the distinctive anatomy could scarcely be traced. Bladder healthy; no urine in it. The large intestines and stomach presented nothing remarkable. The lungs were loaded with black blood; and the heart was small, flabby, the parietes thin, the ventricles rather large, and the valves healthy.

\* \* The above case is, clearly, a strongly marked example of *colica hepatica*, and the spasms were no doubt the result of the passage of one or more gall-stones through the biliary ducts. The patient appears to have died from the depressing influence produced on the nervous system by the agony he endured. It is to be regretted that the head was not examined.

#### LACTATION AND AFTER-PAINS, CONSIDERED IN RELATION TO REFLEX MOTOR ACTION. By W. TYLER SMITH, M.B.

IN 1842 Dr. Marshall Hall proposed to me, as an object in the highest degree worthy of study and research, the connection between reflex motor action and the practice of midwifery. Since that time I have devoted myself to the collection of facts and observations illustrating the importance of the application of the discoveries of this eminent physician to the obstetric art. I mention this in order to show that I have not hastily approached the subject. Though the facts contained in the present paper do not bear directly on the subjects treated of by Dr. Marshall Hall in THE LANCET of March 22nd, they refer to the sympathetic connection between the uterus and the mammae.

#### LACTATION.

Milk is sometimes found in the breasts soon after conception, and in some cases during the catamenial periods in women who are not pregnant. It is occasionally secreted in gonorrhœa, dysmenorrhœa, false conception, hypertrophy of the uterus, ovarian disease, and other affections of the uterine organs. In the parturient state the secretion of milk is in great measure caused by the condition of the uterus during labour. The after-pains also excite the mammae to a considerable extent. On the one hand, *the draught*, as it is termed, excites an after-pain when it is felt in the breasts; and, on the other, an after-pain excites the sensation of the draught. What is understood by "the draught" is the sensation which accompanies the sudden secretion of milk by the mammae, and which is felt over the whole of the chest, the upper part of the back, and other parts. It is produced by various causes, such as taking liquids into the stomach, the application of the child to the breast, or by any uterine irritation.

The draught, when thus excited, must be dependent on nervous sympathy, as the effects of an appropriate stimu-

lus applied at a distance from the mammæ are *instantly* felt in the breasts. The sympathy between the stomach and the breasts is so immediate, that frequently when liquids or solid food are taken, the draught is felt almost before the muscular effort in swallowing is concluded. It was this fact which made the older anatomists believe in some direct vascular communication between the breasts and the stomach. The rapid absorption and distribution of ingesta by the circulation are not sufficient to account for the rapidity with which milk is secreted. Moreover, the sympathetic sensation and secretion frequently take place from the mere excitement of the related organs. The mere sight of the infant will in some women produce the draught.

Dr. Good relates that the Tartars, when they wish to obtain a supply of milk from their mares, are accustomed to irritate the vagina. He founds upon this an argument for allowing wet nurses to cohabit with their husbands. Women with a short supply of milk sometimes do not experience the draught at all, the milk being secreted slowly, but I have observed that in some cases it is felt during the catamenial period, when it is entirely absent at other times.

Thus it appears that the secretion of milk is intimately connected with the state of the uterus; but, though a certain amount of irritation in the uterus is transmitted to the mammæ, and causes them to secrete, yet the law of counter-irritation, or the tendency of irritation in one part of the body to act as a derivative from other parts, is not entirely overcome by the sympathy between these organs. When irritation of the uterus is decided and continuous, so as to cause a large afflux of blood towards it, the sympathy between the two organs is modified. We see that in metritis and in pregnancy the secretion of milk is suspended.

#### AFTER-PAINS.

The uses of the after-pains are the expulsion of coagula, and the contraction of the uterus to its proper size. They generally increase in severity with every successive labour, being trifling in labours with first children, and almost equal to the pains of labour itself, in women who have had many children.

The after-pains frequently continue when there are no coagula to be expelled, and when the uterus has contracted properly, so that it is scarcely too much to say that many women endure great unnecessary suffering from their continuance. In these cases, where the uterus itself is free from irritation, we must look elsewhere for the cause of the uterine contractions. In first labours the milk is not secreted till two or three days after the conclusion of labour, and the child is not generally put to the breast until the milk begins to appear. In subsequent labours it naturally appears in the breasts earlier, and the child is applied to the breasts very soon after birth. I believe the intensity of the after-pains in first and subsequent labours bears a decided relation to the state of the breasts. If the child is applied to the nipple, or if the draught comes into the breast without the sucking of the child, an after-pain is felt in the uterus.

I recently observed the case of a lady lying-in with her fifth child, which was still-born, and though the labour was very severe, the after-pains were slight as compared with those of her previous labours. I attribute this to the absence of the child from the breasts, and to the small quantity of milk which appeared. Where after-pains have been excessive, I have procured almost immediate relief by an anodyne liniment to the breasts. The effects of opiates given internally are uncertain in after-pains. When they are slight, opium readily allays them, but when very severe, they often afford little or only temporary benefit. If the child is not applied to the breast so early as usual in labours subsequent to the first, the after-pains are, according to my experience, considerably diminished in intensity and duration.

In cases where the uterus does not contract perfectly, or when hæmorrhage is apprehended, the sympathy between the breasts and the uterus is of the utmost importance. The action of the uterus can be increased by irritating the breasts, and by promoting the secretion of milk. But after-pains of unnecessary violence may be

prevented or moderated by soothing applications to the mammæ, and by retarding the secretion of milk. My opinion is, that in women who have had several children the infant is generally applied to the breast too soon, and that this is one of the causes of the severity of the after-pains.

The indications furnished by the above facts are calculated to allay the physical sufferings of women in childbirth, but there are numerous other points in midwifery in which the study of reflex motor action is of far greater consequence, particularly in the prevention of the grave accidents to which women are liable in labour and the puerperal state. The writer may be permitted to remark that he is at present engaged on a work which will embrace the consideration of these important topics.

## FOREIGN DEPARTMENT.

### THE ORIGIN OF SYPHILIS. VARIOLA AT BORNEO. (*L'Experience*)

In an article by M. Van Swygenhoven on the diseases of the Dayakois, a wild tribe residing on the south-east and west coast of Borneo, we find that elephantiasis, lepra, and several other cutaneous affections, are common among them. The venereal disease is extensively known. According to the inhabitants of Dayak, the above diseases have exercised their ravages among them for centuries, even previous to their ancestors coming into communication with strange nations. The Dayakois are not more spared from variola, a malady which has proved so destructive to the human species, than the inhabitants of other parts of the globe. Believing that this cruel disease is seldom, if ever, cured, they suffer more from it than civilised nations, neglecting every measure calculated to attenuate its virulence or to arrest its progress. Every person who is attacked by variola gives himself up as lost, and waits for death with the stoicism peculiar to savage races. As may be easily conceived, this state of despair exercises a very pernicious influence over the course of the disease. When variola declares itself among them the only precaution the Dayakois adopt is to abandon their habitations, and to fly to the most wild parts in the hope of escaping contagion; flight being thus the only means of preservation to which they know how to resort.

### ON THE CONSERVATION OF RAIN-WATER IN CISTERNS. BY M. D'ARCET. (*Annales d'Hygiène.*)

When cisterns for the reception of rain-water are constructed without due regard to the action of water on the lime which is used in building them, the water soon becomes loaded with calcareous matter, so as to be unfit for use. It appears that the ancients, according to Vitruvius and Pliny, were in the habit of compressing and smoothing with great care the mortar they used in the construction of their cisterns and aqueducts, that they then saturated it with the dregs of oil, with hot linseed oil, or with some other fatty substance, and afterwards allowed it to remain long exposed to the ambient air before the constructions were used.

We are now more advanced, says M. d'Arcet, than were the Romans, and possess several means of arriving at the same result without depriving ourselves of the use of our cisterns for a great length of time, as they were obliged to do. The plan which M. d'Arcet appears to consider the most efficacious is the carbonatisation of the outer portion of the lime by the means of the combustion of charcoal. This process is well illustrated in the following instance:—

In the year 1812, a gentleman residing at Beaumont, (Oise) at whose house M. d'Arcet was staying on a visit, was having a large cistern constructed in order to collect the rain-water which fell on the roof, for the use of his house, there being no water near except bad well-water. When the cistern was finished M. d'Arcet was surprised to hear the builder state that it was quite ready for the reception of water, and told his friend that if he wished the water it was destined to contain to be fit for use, it was necessary that some precautions should be taken with reference to the lime with which it had been built, the