the nervous structures in correspondence with the affected parts. The case I mentioned in my last lecture would be readily explained on this supposition. The sensitiveness of the vaso-motor nerves, as well as the sympathetic, would lead us to expect that we should find woman more liable to the phenomena which follow both contraction (irritation) and dilatation (relaxation) of the vessels; and this is borne out by everyday experience. The majority of the cases where errors occur in these functions never come on the *post mortem* table, and probably, if they did so, we should find nothing, the action being vital, leaving no sign.

There is one other phenomenon which it might be well to consider a moment. I mean the *growth of the heart* which takes place during pregnancy. This now established fact is doubtless the result of sympathetic excitement communicated from the uterus, and enables it to meet the new requirements. It is a purely healthy process; but it would be interesting to know how far this growth may occur in the presence of large tumours in either sex; and again, how far the opposite, viz., amputation of limbs, would be attended by shrinking of the heart.

One cannot pass this subject without alluding to the changes which occur in the state of the *blood* during pregnancy. There can be now no doubt that this fluid is in a decidedly different condition from that of the non-pregnant state. The blood of non-pregnant women differs somewhat from that of healthy man, being more watery; but when men are of the leucophlegmatic type, their blood is but little different from that of women. But as soon as woman becomes pregnant, the change slowly commences and gradually increases till she arrives at full term. So far as investigations have ascertained, the changes are as follows. It is more watery, its serum deficient in albumen, the coloured corpuscles less, in the proportion of 111.8 against 127.2 in the non-gravid state. The fibrin, on the contrary, is increased, and that undefined "extractive" also. Hence is explained the liability to thrombosis, which is so well known.

There is also a substance passed out from the kidney during pregnancy, which has been called "gravidine", or "kiestine" when altered by keeping. Probably, this previously exists in the blood. There are probably other changes with which we are little acquainted.

It is this state of the blood which renders the woman so liable to contract the formidable blood-changes well known in the puerperal state; it is this which intensifies all the zymotic diseases, when they invade the lying-in woman.

Is it a change found only in the pregnant and puerperal person? Are there no phenomena similar in the male? It may be so; for, at any rate, kiestine has been noticed in the non-pregnant woman by myself; and by others in men. One has a parallel in the susceptibilities to blood-changes in some men who, apparently in excellent health, succumb to pyæmic and septicæmic conditions in a few days.

The process of pregnancy is simply physiological, and is doubtless carried on according to the same principles as the other processes of the body. But it is so enormous a change, and takes place so rapidly, that we are apt to think we find in it new and unique phenomena. In this exaggerated action and its errors, may we not find a magnified view of less but similar conditions in the non-pregnant woman and the male; a more distinct and clear exposition of what is in them ambiguous, both in physiology and pathology.

While on the subject of the blood, I must mention the well-known diseases *rheumatism* and *gout*. Rheumatism, taken generally, attacks, as I have already said, the two sexes nearly equally, rather more males than females; but gout more decidedly selects males for its victims, at least in its articular forms. Dr. Garrod (*Reynolds's System of Medicine*) considers that the occurrence of the menses during so long a period of the woman's life is doubtless a great safeguard against the disease, and, as a rule, whenever it appears in the female it is after the cessation of this function. But Darwin (*Descent of Man*, part 2, chap. 8) also suggests a further explanation; for, in speaking of "hereditary transmission", he says: "That characters which appear late in life in one sex are transmitted exclusively to the same sex. Gout generally falls under this rule, for it is generally caused by intemperance after early youth, and is transmitted from the father to his sons in a much more marked manner than to his daughters." But, doubtless, the more intemperate habits of men and their grosser living, tend very much to the development of this complaint, in addition to the above reasons.

Diabetes mellitus, not unfrequently associated with gout and rheumatism, is much more frequent in males than in females. The origin of diabetes is still undetermined; but the opinion that it is dependent on disturbance of the cerebro-spinal system will receive some support, from the fact that disorders of that system are more frequent in males.

[To be concluded.]

TERMINATION OF THE CASE OF MISS HARRIET MARTINEAU.

By THOMAS M. GREENHOW, M.D., Chapel Allerton, Leeds.

SINCE the publication of the autobiography of Miss Harriet Martineau, it has become incumbent on me to say a few words to the profession on the termination of her case, which, thirty-two years before her death, excited so much interest and attention.

First of all I may observe, what will be obvious to all readers, that section III, vol. ii, page 191, contains *little fact and much imagination*; and that, as was shown by the *post mortem* examination, instead of her being cured by mesmerism or any other agency, although the distressing symptoms were greatly relieved by the palliative treatment exclusive of mesmerism pursued while she was at Tynemouth, no cure was effected, but temporary suspension of suffering took place from natural causes connected with local disease. But, before giving a report of the proofs ascertained after death of what she had suffered so much discomfort from during life, I may refer to her constantly expressed conviction that her disease was of a fatal malignant nature, and could only terminate in early death, and to the fact that, in 1855, eleven years after I had seen her, she consulted two eminent physicians in London, Dr. Latham and Sir Thos. Watson, by whom she was assured that she was free from heart-disease; she nevertheless maintained and asserted her conviction that she would soon die from that cause. In proof of this circumstance, I need only refer to the letter from Sir Thomas Watson,* which appeared in the BRITISH MEDICAL JOURNAL for July 8th, 1876, and in many newspapers.

With these preliminary remarks, I shall now relate the substance of the report of the *post mortem* examination made by Mr. King, by whom Miss Harriet Martineau was attended during the later years of her life, and furnished to me by my friend Mr. Higginson of Liverpool. She died on June 27th, 1876, at the age of seventy-four, twenty-one years after Dr. Latham and Sir Thomas Watson had declared her free from disease of the heart. Of the history of her health since she ceased to be under my observation, thirty-two years before her death, I know nothing except from occasional imperfect reports.

POST MORTEM EXAMINATION.—Forty-two hours after death a *post mortem* examination was made by Mr. King. He says: "On opening the abdomen, the muscular tissue I cut through showed decided signs of fatty degeneration, and a vast tumour became apparent at once. I could pass my hand round it and turn it completely out of the cavity, where it hung by one pedicle, which was found to be attached to the broad ligament close to the cornu uteri. The broad ligament and the Fallopian tube were spread over the surface of the tumour, to which they were adherent, and the tube admitted a wire to be passed through to the extent of three inches or more till it reached the pedicle. The tumour was pear-shaped, with the narrow end within the pelvis. In the longer diameter, from the upper to the lower extremity, it measured twelve; in the lateral direction, ten inches. On cutting into the tumour, about half a pint of brown fluid escaped; the remainder of the contents consisted entirely of a mass of greyish-brown soft stuff. I can only compare it to bread soaked in tea, dotted here and there with white hardish pieces, exactly like half of apples, generally two halves being together. I have had the sac preserved in spirits. On sewing up the incision, Mr. Higginson found that it would contain 110 ounces—10½ imperial pints. The larger circumferences measured 30 inches, the smaller 28 inches. The pedicle had the appearance of having been cut pretty close to the uterus. The interior was still lined with abundant flakes of white and rather glistening substance, which did not grease the paper nor melt under heat, but gave off a slightly grizzled smell. Under the microscope, crystals of cholesterin were sparingly found, and granular matter. The disease was in the left ovary. The uterus was small and unaffected. The right ovary was normal. The liver was elevated into the chest by pressure from below, but otherwise appeared normal. The kidneys showed nothing remarkable. The intestines nearly entirely occupied the upper cavity of the abdomen, the stomach being much pushed up, and to the right overlapping the liver a good deal. The diaphragm was much arched, by which the cavity of the chest was much diminished. There must of necessity have been considerable interference with the action both of the lungs and heart from pres-

* Sir Thomas Watson says: "I have been in the habit of illustrating my caution by likening the heart so affected to a china jar slightly cracked, which, if carefully handled, may remain long unbroken, but which heedlessness or accident might ruin much more easily than if it were sound; but in Miss Martineau's case there was no such obvious rift, and I therefore affirmed to her that her life was in no immediate danger."

sure." Mr. King says that circumstances did not admit of his examining the chest, but "I conclude that the heart sympathised in the general fatty degeneration of muscular tissue, and during life I was convinced that fatty degeneration existed". "As to the mode of death, this was unquestionably due to failure of the heart's action, which had for some time (about eighteen months) been gradually weakening; and, during the last few weeks of Miss Martineau's life, that organ had failed very markedly."

I have carefully examined, with my friend Mr. Higginson, this very large cyst, which undoubtedly had its origin in the left ovary. The surface was traversed by blood-vessels, and to it was adherent the broad ligament of the uterus with its fimbriated extremity, and the Fallopian tube, this remained pervious, and admitted a wire to be passed through to the extent of three inches, when it came into contact with the pedicle, which was attached to the fundus, or perhaps more properly to the left cornu uteri.

From these data I shall endeavour to deduce a pathological history of the case, which will reconcile the symptoms experienced by the patient with the progress of organic disease.

The first question that presents itself for solution is, How did the displaced ovary arrive at its situation near the uterine extremity of the Fallopian tube just before it entered the cornu uteri?

In answer, may it not be inferred that it had passed through the tube itself, which remains pervious? and, we know, as in cases of extra-uterine pregnancy or the formation of tuberculous matter, the Fallopian tube will admit of almost any degree of dilatation, it might easily enough admit the passage of the compressed ovary, and in process of time regain its original calibre.*

If this inference be correct, the passage of the ovary through the Fallopian tube must have been a slow process, and attended with much suffering, experienced in the early stages of disease. In this respect, it would bear some analogy to the passing of gall-stones or of calculi through the male urethra.

The dislocated ovary in the first stage of its morbid growth, by its weight and connection with the fundus uteri, dragged the uterus down into the lower part of the pelvis, and so produced the retroversion observed when Miss Martineau was at Tynemouth, and by its fixed position between the rectum and the bladder occasioned the distressing symptoms then experienced. But as the displaced ovary gained greater dimensions, it would gradually raise the uterus from its imprisonment in the lower part of the pelvis, and in this way the patient was relieved for a considerable time from the pain and discomfort it had caused. It was this temporary relief which led to the conclusion, not unnaturally, that she was cured. At this time, it is probable, that the growth of the ovarian tumour was not rapid; but, as time went on, its size became so great as to reproduce symptoms of oppression, the history of which is imperfectly known to me, and death has at length revealed the pathological condition which has been described.

In 1841, when Sir Charles Clarke saw Miss Harriet Martineau, careful examination led us to conclude that the retroverted uterus was itself enlarged, and that it would eventually gain such dimensions as to raise it from its fixed position and so afford relief to the patient. But we were convinced that no malignant disease existed in the uterus. The displaced ovary was at that time behind the fundus uteri, and probably gave the impression of abnormal enlargement of the uterus itself. Or, it is possible, that such enlargement actually existed, and that in the subsequent progress of disease the ovary might gain nourishment at the expense of the uterus, thus inducing the small size of that organ at the time of death. It is not easy to define the changes produced during the lapse of thirty-two years. Whether some years ago, while the constitution retained some vigour, and the tumour had not yet attained its great size, it might have been successfully removed by operation, so as to effect a *real cure* of the disease, I had no opportunity of judging.

Such is a brief sketch of the conclusions at which I have arrived after careful reflection on this interesting case: interesting, not only

in reference to the eminent lady who was the subject of it, but, perhaps, as affording a contribution of some value to the class of diseases of which it is a remarkable example. Perhaps, too, it may serve in some degree to explain some of the peculiarities of character which were apparent during her remarkable career.

THE ADVANTAGES OF EARLY OPERATION FOR THE CURE OF HARE-LIP.

By HENRY G. RAWDON, M.D., M.R.C.S.,
Surgeon to the Liverpool Infirmary for Children.

In the following remarks, I propose advocating the practicability and desirability of operating for the cure of hare-lip very soon; I mean within a few hours after birth. It is no doubt true that this has been occasionally done; but the practice has, as yet, neither received the sanction of our surgical authorities nor has it been fairly tested by experience. As a matter of fact, most surgeons prefer postponing the operation till after the third month. This means that infants suffering from hare-lip are most frequently so feeble and imperfectly nourished, from the first ten days or so after birth till they are over three months old, that an operation cannot be undertaken without unjustifiably hazarding life.

It is perhaps not so well known as it might be, that the mortality attending the rearing of these unhappy little ones is very considerable, more particularly in large towns, where the attempts to hand-feed are too often very injudicious. If the fatality in these cases be so great as I am inclined to believe, at least among the poorer classes in towns, it is obvious that the cause is the absence of the natural nutriment: breast-milk. Consequently, we may safely conclude that if such infants, by early operation, can be placed in a position to obtain their natural nourishment, the cause of fatality will be removed. The practice of early operation, however, can only be recommended when there is a reasonable hope of the infant being afterwards able to take the breast; therefore, where there is no prospect of this end being attained, as in cases complicated with extensive cleft palate, the operation cannot be urged.

An argument in favour of the practice I propose, is the fact that infants, born with this class of deformity, are for the most part strong and in really good condition at birth, and continue so for a week or two, until the attempt to bring them up by hand, even when judiciously managed, begins to tell, and they more or less rapidly fall away, and often have a great struggle for life in the earlier weeks.

Does it not, therefore, appear a prudent thing to take advantage of the inherent vitality of the new-born infant, and operate within twenty-four or thirty-six hours after birth?

It is scarcely necessary to state that there is seldom difficulty in preventing the milk from leaving the mother, during the few days the lip will require to form a sufficiently firm union for the infant to begin to take the breast.

I have lately had two cases under my care, which tend to support the practice I recommend. In the first, which occurred in private practice, I operated, November 2nd, 1876, about twenty-three hours after birth. In this case, both hard and soft palates were completely cleft, therefore, I did not recommend operation, as sucking would necessarily be impossible; however, as it was the wish of the medical attendant, and the parents were extremely anxious it should be attempted, I operated. The fissure was on the left side, and into the nasal cavity. The intermaxillary bone projected very considerably, and required to be cut across on the right side and bent into position. The lip had also to be well freed from its bony attachments on each side. The bleeding was not excessive, and was well controlled by small pads of rolled lint pressed upon the cut surfaces for a few minutes. I used three silver sutures and one entomological pin (the hare-lip pin recommended by Mr. Stokes of Dublin). This latter I removed the following day, when I found union perfect, and in two or three days afterwards I removed the silver sutures. The child bore the operation remarkably well, and the result was extremely gratifying. I have lately been informed it is thriving as fairly well as can be expected, considering it was brought up by hand.

The second case was a feeble and imperfectly nourished infant, five weeks old, which came under my care at the Infirmary for Children, October 18th, 1876. The fissure was on the left side, exposing the nasal cavity, and the anterior half of the palate was cleft to a considerable extent. To my surprise, I found that the mother still retained her milk, and that with assistance by pressure the child was able to obtain a certain, but obviously insufficient, amount of nourishment. The cleft in the palate was very wide, and the intermaxillary bone extremely

* My friend Mr. Higginson does not quite perceive the probability of the passage of the displaced ovary through the Fallopian tube; but pathology discloses many unlooked-for facts; and the situation of the pedicle, which appears to have grown from the Fallopian tube just before its terminations in the cornu uteri—the tube being pervious to that point and no further—and the division of the pedicle having taken place at the same point, so as to leave the uterus on the one side and the tumour with the remainder of the Fallopian tube and broad ligament on the other, seems to render it highly probable that the ovary of its normal size forced its way through the Fallopian tube to its ultimate position. I can find no record of a similar process, but it may have happened in other cases without observation. But whether correct or mistaken in this conjecture, the general history of the case remains untouched in its three stages: first, of suffering; secondly, of temporary relief (supposed cure); thirdly, of renewed illness, associated with collateral symptoms and so ending in death.