taste of blood in the mouth, and this I found to be owing to a slight oozing from the gums. These peculiarities were, it is true, elicited at a comparatively early period of the ascent, which I attribute to the fact previously mentioned.

In the year 1846, when living among the Bernese Alps, I had still further opportunities of ascertaining the effect of great altitudes upon the body. In conversing at the hospice of the Grimsel, with some of the chamois hunters and attendants, who spend a large portion of the year at a height of 6,000 feet and upwards, I learned that habit had a great effect in doing away with those unpleasant effects which a rarefied atmosphere would produce upon an inhabitant of the plain. This I found to be actually the case during the ascent of one of the loftiest of the Bernese Alps, the Wetterhorn, or Peak of Tempests*. In scaling this hitherto untrodden summit, I was accompanied by three men, one an inhabitant of the plains, (although accustomed to ascend the lower and more accessible mountains in the neighbourhood), the two others habitually living at an elevation of between 6,000 and 7,000 feet, and inured to daily exertion of a severe nature. In these two men I could at no time detect aught that was unusual, save a shortness of breath, and a necessity for frequent halting during the ascent of the terminal ice-bound peak. The inhabitant of the plains however, evinced symptoms of distress at a very early period, and complained of nausea, thirst, oppression of the chest, and throbbing in the head. In my own case, the departure from the ordinary condition of health was but trifling, owing to having become somewhat accustomed to the atmosphere of lofty regions, and familiar with the species of exertion required to reach them. Occasionally, at some of the steepest and most dangerous parts, a feeling as if all power had been suddenly abstracted from the lower limbs, together with that sensation before described as experienced at sea or in a swing, necessitated a halt, and this sufficed to banish all unpleasant feelings. I may also add, that the whole party experienced a complete distaste for food, almost indeed amounting to loathing, and a wish rather for fluids. These we found to be very palatable and refreshing, when taken in small quantities. On arriving at the summit, I again felt the same peculiar sensation, previously noticed when on the Buét, together with increased rapidity of the respiration. The chamois hunters appeared but little inconvenienced; I remarked, however, that their distaste for food was as great as my own, while the guide who had accompanied me from Interlachen evidently suffered considerably from the effects of the elevated position upon which we stood; he appeared overcome by sleep, complained of throbbing in the head, nausea, difficulty of breathing and great thirst, and was utterly incapable of appreciating the stupendous panorama spread out before our eyes.

During the descent, comparatively few complaints were made by any one of the party, although the effects of the exposure to the reflection of an unclouded sun from the pure unsullied snow were very severe, and lasted for several days, producing vesication of the face, and in the chamois hunters an attack of ophthalmia; they having omitted to wear blue glasses during the ascent.

From these observations I conceive that, as a tolerably satisfactory answer to the first question proposed, it may be stated that at great elevations there actually do occur certain modifications in the natural functions of the body, in no way to be accounted for, but by admitting the existence of influences to which at an ordinary level it is not exposed.

[To be continued.]

CASE OF FIBROUS TUMOUR OF THE UTERUS, IN CONJUNCTION WITH PREGNANCY;

LACERATION OF THE PERITONEUM, AND HÆMORRHAGE INTO THE ABDOMEN.

By R. R. ROBINSON, F.R.C.S. Eng., late President of the South London Medical Society, and formerly Surgeon to the London Dispensary.

(Read before the Royal Medical and Chirurgical Society, Jan. 14th, 1851.)

CASE. In October, 1840, I was requested to attend a tradesman's wife, æt. 40, in her third confinement. I learnt that she had recently moved into her present residence, and that she had greatly exerted herself in cleaning it; that all through her pregnancy she had been much oppressed with flatulency, and had had misgivings about the result, having felt differently from what she had done on previous occasions; that four days previously she had slipped down four stairs, from which she did not experience any inconvenience; and that on the same day she caught her foot against a chair, which caused pain in her left hip, which she had at times felt since. I first saw her at noon; the membranes had broken eight hours previously. The pains had been frequent and regular. The external parts were relaxed. The os uteri was so far back that it could scarcely be felt, and was open to the size of an eighteenpenny piece; the vertex was presenting. She was at this time very much troubled with flatulency, for which warm gruel, with a little ginger, was given with relief. The pains continued strong and regular; the os uteri gradually dilated; and the child was born at four o'clock in the afternoon. It was large, blue, and almost dead, but recovered. The placenta was thrown off naturally shortly afterwards; the uterus contracted firmly; there was no hæmorrhage. I left her to all appearance well, an hour after her confinement. Her pulse was seventy-two in a minute; the urine had passed freely; the bowels had been opened five times that morning, and five times the day before.

About five hours after her confinement, I was called to her in haste. She had been allowed to remain undisturbed for two hours, when she was taken with cold chills; and upon being put to bed, she was seized with sickness (the flatulency still continuing), and she was very faint. Upon visiting her, I found her quite pale; her countenance shrunk, and very anxious; her lips pallid; the skin cold and clammy; the tongue very pale. She was conscious, but so faint that she could scarcely whisper. The pulse was all but imperceptible at the wrist; there was a very slight draining from the uterus; the breathing was slow and natural; sickness was constant; the abdomen was much distended, particularly below the umbilicus, and evidently tympanitic. The uterus could not be felt by the hand applied to the hypogastric region, neither did kneading pressure make it more apparent, or produce uterine contraction. Fearing that there might be internal uterine hæmorrhage, and not being certain about the state of the uterus, I introduced my hand with great facility, and found it somewhat large, empty, and flaccid. Thinking that relaxation of this organ might have had something to do with the symptoms present, I kept my hand steadily where it was, and, by means of an assistant, had pressure made externally upon the uterus; brandy and laudanum being at the same time administered. Finding but little good from these means, I tried the effect of cold. Wet cloths were first applied, and then a plate immersed in cold water, to the lower part of the abdomen; neither of which produced much effect. Cold water was therefore poured from a height upon the abdomen. This produced a slight shock upon the system, more decided uterine contraction, and more pulse. The uterus, however, again relaxing, it was necessary again and again to resort to the cold affusion. After each application, there were decided uterine contractions, more pulse, and a less anxious state of countenance. After an hour's trial of this plan, the uterus had contracted sufficiently to allow of my withdrawing my hand. Two

* A detailed account of this ascent was published in the *Athenæum* of Nov. 1st, 1846.

drachms of laudanum and much brandy had been given ; and although the skin was icy cold, and the pulse, though steady, 120 in the minute, the patient seemed more calm, and disposed to sleep.

On the following morning, I found that for an hour or two there had been a decided rally, and she had dozed a little : but there was then no real improvement. The countenance was very much pinched ; the skin deadly cold and clammy ; sickness was constant ; there was much flatulency ; and the abdomen was tender—not much distended, but decidedly tympanitic. She cried out at times, apparently from spasm of the abdomen. The pulse was exceedingly feeble. Bottles of warm water were applied to the feet and armpits ; and two assafetida injections had been given, which came away almost immediately, expelling very little motion, and some flatus.

In the afternoon, the collapse being if anything more complete, a turpentine injection was administered ; mustard plasters were applied to the abdomen ; and ammonia with aromatic confection were taken every half-hour for some hours ; brandy and beef-tea were also given. In the evening, the pulse was stronger ; the skin warmer, and less clammy ; the sickness still continued ; there had been no motion. No urine having passed, a catheter was introduced, and about an ounce withdrawn. An effervescing draught was ordered to be taken every four hours, and the turpentine injection to be repeated in the morning.

On the morning of the third day, the injection was repeated, but returned instantly ; the pulse declined, and the woman appeared sinking. To my surprise, however, in a few hours there was a decided rally. The countenance, although shrunk, was more animated ; the cheeks were flushed ; the surface was warmer ; she took notice of objects, which she had not done before, and was even cheerful. The abdomen was not more distended, but tender to the touch ; the spasmodic pains recurred at times ; vomiting was incessant upon taking anything ; she had had no motion. The tongue was very much furred and dry ; there was incessant thirst ; the pulse was stronger, rather sharp, regular, 110. The urine had passed freely two or three times. The turpentine injection and the effervescing mixture were continued ; a bran poultice was applied to the abdomen, and calomel and opium ordered to be taken every four hours, in the form of powder.

On the fourth day, it is stated that the powders had been regularly taken ; several turpentine injections had been given ; and salts and peppermint-water were taken every four hours alternately with the calomel and opium. The sickness was incessant ; she had had one slight motion ; the abdomen was distended, and decidedly more tender upon pressure, especially the hypogastric and left iliac regions, where there was much greater solidity than elsewhere, and than had ever been perceptible before. She was ordered to continue the calomel and opium, and the salts and peppermint.

On the fifth day, it is reported that there had been some variations, but no important change for the better. The medicines were continued at longer intervals on the sixth day, and the injection was repeated ; after which about a pint and a half of fluid, tinged with fecal matter, came away ; and during the night and following morning several motions and much flatus were passed. The abdomen diminished in size, and was much less tender ; the hardness in the left iliac region greatly subsided ; and the uterus could be felt in the hypogastric region, about the usual shape and size for the time after delivery. There was also much less sickness.

On the seventh day, the tongue was more moist, and the surface warmer—more, however, from hot bran constantly applied to the abdomen than from the development of animal heat. The pulse was still feeble, and varied from 110 to 120. She was inclined to take nourishment, and she had, therefore, beef-tea and porter, and took them with relish.

On the eighth day, there was evidently more weakness and more emaciation. There was slight increase of sick-

ness, and hiccup occurred. The teeth were covered with sordes, and there were frequent alvine discharges. Mercury with chalk, opium, aromatic confection, and ammonia were prescribed, and a starch injection, with laudanum, was administered, by which the bowels were quieted. Refreshing sleep was procured by the acetate of morphia, but the patient became more and more exhausted ; the sickness and hiccup recurred ; she gradually sank, and died in the morning.

Dissection, twenty-four hours after Death. The body was not so much emaciated generally as might have been inferred from the aspect of the face and chest. The abdomen was not much distended ; it had some hardness and preternatural solidity at its lower part ; the peritoneum lining the abdominal parietes was of a dark green colour ; the intestinal convolutions were of a dark brown colour, in many parts being smeared with blood. Fully three pints of dark venous blood, quite free from coagula, were removed from the abdominal cavity. The convolutions of the small intestines were united to each other and to the uterus, by recent and easily separable adhesions. Upon breaking through these, there was observed, attached to the fundus of the uterus, but having no

Fig. 1, represents the large fibrous tumour attached to the fundus of the uterus:—the dark parts of it are where blood was extravasated ; the dark part under the tumour shows the size, shape, and situation of the rupture in the peritoneum. The back view of the uterus only is given, with which the ovaries, round ligaments, etc., are incorporated, the parts having been coagulated and matted together by strong spirit, in which the preparation was immersed with a view of preserving the vascularity of the tumour.

communication with its interior, a tumour of livid aspect in size and shape like a moderate sized placenta, the long diameter of which was placed transversely. This tumour was covered with peritoneum, a prolongation of that enveloping the uterus : this membrane, near the angle of

reflection, was lacerated to the extent of nearly two inches, and from it the blood found in the abdomen appeared to have oozed. Upon making an incision along the upper part of the tumour, nearly down to its uterine attachment, it appeared to be composed of three lobes—a right, a middle, and a left, the middle lobe being separated from the others by a white ligamentous structure. The right and middle lobes were softened, and of a deep chocolate colour, and appeared to be principally composed of a congeries of vessels; the left was of a pale brown colour, and had a fibrous aspect. The uterus was not firmly contracted, but of the size usual in a person so recently confined; its mucous membrane was of a dark colour. The os uteri was elevated and granular. A drop of purulent looking fluid issued from one of the veins, upon cutting into it. There was a patch of lymph, about the size of a shilling, on the mucous membrane of the upper part of the vagina. The ovaries, Fallopian tubes, and, indeed, all the other abdominal and pelvic viscera were healthy. The head and chest were not examined.

The preparation was subsequently exhibited at the Pathological Society; and upon a further incision being made into the tumour by Dr. Quain, a cyst, about the size of a walnut, containing a clear colourless fluid, was found in the left lobe, and the base of the tumour was found of a deep red colour, from extravasation of blood.

Dr. Quain also made a microscopical examination of the tumour, and the following is the account he has been kind enough to give me:—

"I have examined the specimens of tumour which you gave me, and find them to consist—First: In some parts of a fibrous structure, altogether analogous to that of fibrous tumours, but apparently more vascular: at least I can observe much larger and more numerous blood-vessels. Secondly: In the immediate vicinity of the cyst which was divided, I find the structure less distinctly like fibrous tissue; it is mixed with a quantity of granular matter, and numerous blood-vessels can be seen.

"The inference which I am disposed to draw is, that the tumour had increased during pregnancy,—the vascularity suggests that idea; and that this increase was subsequently much exaggerated by hæmorrhage and the coagulation of fibrin which subsequently took place. The length of time during which the preparation has been kept in spirits, renders the examination difficult, and its results doubtful; however, I have compared them with those found in an ordinary fibrous tumour kept under nearly similar circumstances."

REMARKS. I have been induced to offer this case to the notice of the Society, under the belief that there is not one exactly similar to it on record. Tumours of the uterus are not of unfrequent occurrence: they sometimes grow to a very large size; one is recorded weighing *forty pounds*.* They are not very unfrequently met with in conjunction with pregnancy; in some cases interfering with parturition, from mechanical obstruction, in others occasioning severe uterine hæmorrhage, as in a case mentioned by Hildanus, in two cases occurring to Madame Boivin, and in others recorded by more recent writers; but not one, I believe, has been mentioned where hæmorrhage has taken place into the abdomen, from rupture of the peritoneal coat which attached the tumour to the uterus. It appears to me also to have other points of interest, to which I will next allude.

There are three circumstances worthy of note in respect of the tumour: its structure, its situation, and its growth.

Structure of the Tumour. This tumour comes under that denomination described by a modern author as "a tumour, whatever its size or induration, growing externally; and, by

projecting the peritoneal coat of the uterus, obtaining from it an external covering."† It was in parts decidedly of a fibrous nature; but in others it possessed somewhat the characters of an erectile tissue. It was of a chocolate colour, and was composed of a congeries of vessels, together with ligamentous bands, and was softening in the centre, as if a malignant character had been implanted upon that originally fibrous.†

Situation. The situation of the tumour was that most usually met with; and that perhaps, generally speaking, where it was least likely to be dangerous: it was placed upon the fundus of the uterus, immediately underneath the peritoneal coat. It was not so likely, therefore, to lead to uterine hæmorrhage on the one hand, as it would in all probability have done if placed in or under the proper uterine tissue; or to mechanical obstruction on the other, as would most likely have happened had it been seated laterally. Had this woman not been pregnant, it is probable that the tumour would have remained for many years without producing much, if any, inconvenience.

Growth. I am of opinion that the tumour, at first of small size, grew with great rapidity, in consequence of the

Fig. 2. exhibits two small fibrous tumours in the fundus of the uterus—one entire, the other cut open, to show its structure. If the woman from whom this specimen was taken had been pregnant, I think it possible that these might have grown with great rapidity, and consequently might have attained the same size as the other tumour.

* Ashwell, on Diseases of Women, pt. II, p. 286.

† The usual distinction must be drawn between the tumours and the outgrowths of the same structure. The uterus presents examples of both. The fibrous uterine polypi, more properly so called, are continuous outgrowths of and from the substance of the uterus; the mucous membrane and the muscular and fibrous tissues of the uterus, growing in a variety of proportions into its cavity and that of the vagina. The fibrous tumours, as distinguished from these, are discontinuous growths of similar tissue in or near, not of the substance of the uterus."—*Payet's Lectures*, Lect. v, pt. I.

† One great object that I had in bringing this case before the Society, was the hope that the malignant degeneration of fibrous tumours would have been discussed; although disappointed in that respect, I am glad to find the subject considered by Mr. Paget, in his valuable Lectures, delivered at the College of Surgeons subsequently to the reading of this paper, from which I quote the following observations, as bearing upon this point:—

"I can scarcely doubt that certain tumours, presenting in all apparent structure the same characters, may in different persons appear innocent or malignant; but respecting the grounds of these differences, I can, as yet, scarcely offer a suggestion."—*Lect. v, pt. II.*

"In corroboration of the above remarks, allusion is made to a case where Mr. Lawr-nc removed a large well-marked fibrous tumour, which had grown nine months after one of the same appearance had been removed from the same part. Before removal, this was judged by all who saw it to be malignant; but it presented a genuine fibrous structure, and could not, I think, be distinguished from an ordinary fibrous tumour."—*Lect. v, pt. II.*

Also "to another of Mr. Stanley's, where a tumour recurring after removal more than once, amputation was performed. The tumour was milk-white, soft, and brain-like, except where discoloured by effused blood; and in the exposed parts, was soft, pulpy, and grumous. One would certainly, judging by its general aspect, have called this a brain-like medullary cancer; and yet it had essentially the same microscopic characters as the tumours I first examined from the same patient, only the narrow, elongated caudate cells were very generally filled with minute shining molecules, as if from fatty degeneration connected with protrusion and partial sloughing of the mass."—*Ibid.*

"Whatever be the truth concerning the supposed transformation of an innocent into a malignant morbid structure, I think it cannot be doubted, that in the cases of some recurring growths, the successively later growths acquire more and more of the characters of thoroughly malignant disease."—*Ibid.*

* Lever, on Diseases of the Uterus, p. 111.

† The extent of growth appears unlimited, and among the fibrous tumours are the heaviest known. They have weighed fifty, sixty, and seventy pounds. Waller refers to one of seventy-four pounds; and to one described in an American Journal as having been estimated at one hundred pounds."—*Payet's Lectures*, Lect. v, pt. I.

large supply of blood to the uterus during pregnancy; and this view is, I think, confirmed by Dr. Quain's microscopic examination, and by the appearance of another preparation, which I also exhibited, and also by the way in which it was covered, and, as it were, *entangled* by the convolutions of the intestines.

Source of the Hemorrhage. Upon this point there can, I think, be but little doubt; for upon elevating the uterus, with the tumour attached, a laceration, about two inches in extent, in the peritoneum, going from the posterior part of the uterus to the tumour, was at once apparent; and as there was no other laceration in that membrane, it seems all but certain that the bleeding had proceeded from it. This constitutes the great peculiarity in the case, as it is the only one with which I am acquainted where a fibrous tumour of the uterus has terminated fatally in that way.

Cause and Time of the Hemorrhage. At the cause and time of the bleeding, there is some difficulty in arriving. It seems most reasonable to conclude that the rent was produced when the uterus was contracting violently, during the birth of the child: the tumour being entangled among the convolutions, could not follow the uterine movements so quickly as was necessary, and thus the peritoneum was put upon the stretch, and, upon the recurrence of pain, gave way. But, on the other hand, had that been the case, collapse would in all probability have occurred at the moment of birth, whereas no sign of anything being wrong was then apparent. The placenta was thrown off by the natural powers about the ordinary time, without any inconvenience; and it was not until the woman was put to bed three hours after the child was born, that the mischief showed itself.

Cause of the Collapse. This point is also involved in obscurity. If it arose from the rupture of the peritoneum, the cause most likely to have produced it, and if that took place at the time I have suggested, it would most probably have shown itself earlier; if it arose from the hæmorrhage, the symptoms to have been expected were simply those of syncope; and although these were the symptoms first manifested—namely, chilliness, paleness, sickness, and faintness, yet when I arrived they were decidedly those of collapse,—a shrunk and very *anxious countenance*; a clammy skin, so peculiar to this condition; a voice scarcely beyond a whisper; and a pulse all but imperceptible at the wrist. The only conclusion, therefore, at which I can arrive is, that her condition was partly owing to the extravasation of blood, and partly, also, to the rupture of the peritoneum. This possesses additional interest when contrasted with another case of extensive abdominal hæmorrhage, conjoined with rupture of the peritoneum, that came under my care, and which is already published.* The symptoms were in many respects the same in both; and in both there was nearly the same amount of blood extravasated; yet in one case death was produced in about twelve hours, and in the other the patient survived until the tenth day. In one, the patient was at once destroyed by the shock to his system; in the other, death appears to have ensued from atonic peritonitis. May not the difference in the treatment pursued in some measure explain this? The case so rapidly fatal was attended by spasm and pain of the abdomen, which naturally called for the application of *warmth*; whereas the other, occurring so soon after labour, and having some symptoms in common with internal uterine hæmorrhage, as naturally suggested the application of *cold*, by which it is probable that the hæmorrhage was in some degree arrested.

Another question arises here. Was the blood found in the abdomen all extravasated soon after the laceration? or did it continue to ooze up to the close of life? Upon the first supposition, the blood would most probably have been found coagulated, (its non-coagulation is extraordinary under any circumstances,) and might have been otherwise changed; upon the latter, it seems scarcely reasonable to suppose that the patient would have rallied at all.

Cause of the Peritonitis. The inflammation of the peritoneum, which partook of the enfeebled powers of the constitution, appears, like the collapse, to have had a two-fold origin, and to have been attributable partly to the rupture of the peritoneum, and partly to the presence of extravasated blood.

Induction of Premature Labour. Could this woman's condition have been known, there seems great likelihood that her life might have been preserved by the induction of premature labour; as, at an earlier period, in all probability the tumour would not have been so large as it was at the full period of gestation; it might not have been so entangled in the intestinal convolutions; and the pains for expelling the child might not have been so strong. Laceration, therefore, would have been less likely to have followed. But as, until the fatal event, there never was any sign which could lead to the supposition that such a tumour existed, the induction of premature labour could never have been contemplated in this case. As, however, it brings to light a fresh danger connected with these cases—namely, rupture of the peritoneum, from long-continued uterine action, it affords an *additional* reason for advocating premature delivery where the existence of a uterine tumour in conjunction with pregnancy is clearly ascertained.*

I cannot help alluding, in conclusion, to the serous cyst subsequently discovered in this tumour; and I do so chiefly to introduce the following observations from Mr. Paget's Lectures.

"We find examples of fibrous tumours thickly beset with small, well-defined, and lined cysts. This appears to be the nature of the hydatid testis described by Sir A. Cooper. A similar condition may be found, but is rare, in fibrous tumour of the uterus. In another set of cases, we find one large cyst existing alone, or far predominating over all the others in a fibrous tumour. This is most frequent in the tumours in the nerves and in the uterus. In the latter organ it has peculiar interest, because the cyst, if it attain a great size, may be mistaken, and treated for an ovarian cyst. Several such cases have happened. In the College Museum is a preparation, the history of which, sent by Sir E. Home, is that it is a portion of a uterus in which a very large encysted tumour had formed. The patient had been tapped twice, and the cyst emptied. The case was supposed to be ovarian dropsy during life. In another case, Mr. Cæsar Hawkins, suspecting ovarian disease, drew fifteen pints of fluid from a great cyst in a fibrous tumour of the uterus. The patient died a long time afterwards. The specimen, which is in St. George's Hospital, shows an enormous fibrous tumour in the side wall of the uterus, having one vast cavity, and in its solid part many small cysts." (*Lect. v, part 1*.)

NOTES ON THE TREATMENT OF ERYTHEMA NODOSUM, URTICARIA, AND ERYSIPELAS.

By W. S. OKE, M.D., Physician to the Royal South Hants Infirmary.

I. ERYTHEMA NODOSUM. This is a disease of not unfrequent occurrence, and is met with in females from the age of puberty to about 25 years. It more commonly affects cottagers and servants, and is rare amongst the better classes of society.

The eruption is characterised by tumefactions of the skin, of an irregularly round or oval shape, and about the size of the long section of a damson. The spots are at first red, but soon become more or less livid, and assume the ap-

* From what took place at the discussion of my paper, I fear the above observation was misunderstood; some explanation may therefore be necessary. It was very far from my intention to advocate the induction of premature labour in all cases of fibrous tumour, or indeed in fibrous tumour as a rule at all; but only to suggest, that as certain reasons have been assigned for that operation, such as want of space for a full-sized foetus to pass, the blocking up of either the inlet or outlet of the pelvis by tumours, etc., so, should a fibrous tumour be discovered before parturition, and be observed to be growing rapidly, then the fear of the rupture of the peritoneum from strong uterine action would be an *additional* reason for resorting to this proceeding.