same statement with regard to the neighbouring valley of the Upper Engadin; and Dr. Bener of Klosters likewise states that, in the upper part of the Prättigau, immediately adjoining the Davos, although below the level of 4,000 feet, he has not met with consumption; while it has repeatedly occurred to him in the lower part of the same valley.*

The absence of consumption and scrofulous diseases among the inhabitants of the valley who have never left their home, the influence exercised on these diseases, when the natives have acquired them during their stay in other localities, by a timely return to the valley, and the usually favourable termination of pneumonia, are important facts in recommendation of the curative influence of such mountain valleys in scrofulous and consumptive diseases—facts which cannot be urged in the same manner for other localities greatly in favour with the profession and the public. I can, however, not deny that there are also disadvantages connected with a prolonged stay in these mountain regions, especially the want of the habitual society and healthy excitement, and of the accustomed comfort. I do not undervalue these disadvantages, which to some invalids are most serious drawbacks; but, if it could be proved that, in a certain class of cases, the curative influence is much greater than in the usual and more agreeable health-resorts, the profession would sooner or later declare in favour of the elevated regions, and the present disadvantages would thereby gradually be much lessened. I shall, for this purpose, give an outline of those cases which have particularly influenced me in forming a favourable view, and then add a short abstract of the observations made by Drs. Spengler and Unger at the Davos.

CASE I. J. H., aged 24, a clockmaker from the Black Forest, who formerly had enjoyed good health, came to England in the summer of 1848. He had repeated attacks of sore-throat and bronchitis in the same and in the following winters, and became an out-patient of the German Hospital in the summer of 1851, with cough and dyspeptic symptoms. He had slight dulness and impaired respiration in the right clavicular and infraclavicular region; and, with slight variations, gradually lost weight up to September 1852, when he was seized with bronchopneumonia of the lower part of the left lung, slowly creeping upwards, until, in the beginning of November, the dulness reached on the back up to the upper third of the scapula; the crepitant rhonchus having ceased in the lower portion of the dull space, but being persistent in the upper. On the right, the originally diseased side, the dulness extended from the apex to the fourth rib, and was accompanied by a slight degree of bronchophony and large-sized rhonchi. There was great emaciation; pyrexia every evening, followed by perspiration towards the morning. Pulse 110 to 120; and chest-expansion 33 to 34½ inches. In this condition he returned to his home in the Black Forest, about 2,800 feet above the sea-level; where, after some weeks, on milk diet, he gained strength, lost the night-perspiration, and gradually also the cough. In July 1853, when he returned to London, nothing abnormal could be discovered on the left side. The upper part of the right was considerably flattened; but the dulness extended only from the apex to the second intercostal space; the bronchophony was replaced by absence of vesicular murmur and prolonged expiration; and there were no rhonchi. Pulse 82; chest-expansion 34½ to 36½ inches; increase in weight, 21 lbs. He remained well up to August 1854, when he again began to cough; not long after which, while at work, he was seized with violent hæmoptysis, and died on the fifth day.

Post Mortem Examination. The upper lobe of the right lung was adherent; the apex hard, contracted, consisting entirely of slate-coloured, dense, fibrous tissue, almost grating under the knife. The lower part of the same lobe was expanded, as in emphysema. The two other lobes were free from old disease; but several bronchi were plugged up with coagulated blood. The left lung was everywhere adherent. In the centre of the upper lobe was a small fresh cavity filled with blood, with grey soft infiltration in its neighbourhood. In various parts of both lobes were apoplectic nodules; several bronchi were filled with decomposing coagulated blood. The heart was fatty. The liver was likewise slightly fatty. The kidneys were congested.

This case, which evidently was one of Addison's pneumonic phthisis, is of great interest, not only on account of the rapid recovery after the patient's return to his mountain home, but also on account of the relapse and fatal termination after the too early return into unfavourable conditions; and, further, on account of the light thrown upon the nature of the affection by the result of the *post mortem* inspection.

CASE II. J. K., aged 22, a native of Switzerland, formerly healthy, came to London in 1849, and was employed as a waiter in a City dining-room. He began to cough in 1850, and had hæmoptysis in February 1852. Dulness and rhonchi extended from the right apex to

the third rib. There was increase of cough and pyrexia in July. Pneumonic affection of the lower part of the left side was discovered in August. The dulness and crepitant rhonchi gradually ascended to the supraspinal region on the left side (in November); and the older affection of the right side had much extended. The patient was never entirely free from fever. Loss of weight, 30 lbs. in eight months; pulse 90 to 95; respirations 30 to 36; expansion of chest, 34½ to 35½ inches. In this condition he returned home in November to an elevation of about 5,000 feet; and there, on an almost pure milk-diet, he gradually improved, and came back to London in May 1853, having gained 24 lbs. The left side appeared normal; the upper part of the right was sunk in; but there were no rhonchi, and the dulness and defective breathing extended only to the second rib. Pulse 75; respirations 24; expansion of chest, 35 to 37½ inches.

He remained well until March 1855, when he contracted bronchitis, followed by pleuropneumonia of the right side, beginning at the apex, and extending rapidly downwards. In June, the upper part of the left side became likewise affected. Death ensued at the end of this month, from hæmoptysis.

Post Mortem Examination. There were extensive adhesions on both sides. The upper lobe of the right lung was much contracted and puckered; the apex was occupied by several chalky concretions, surrounded by dense, fibrous, slate-coloured, airless tissue. The remainder of the right lung was in a state of soft grey infiltration, with several fresh irregular cavities. The apex of the left lung was in a similar condition; but the greater part of this lung was permeable to air; it contained many hæmorrhagic spots. There were no milary tubercles. The heart was fatty. The kidneys were in the first stage of Bright's disease.

This was again a case of Addison's pneumonic phthisis, occurring under the influence of confined air in a youth accustomed to pure mountain air. Great improvement or cure was produced by a prolonged stay in his native mountain climate—an improvement which continued for some years after his return into unfavourable hygienic conditions. At last, however, a fresh attack of catarrhal pneumonia led to rapid breaking down of tissue, the formation of cavities, and death accelerated by hæmoptysis.

[To be continued.]

CONVULSIONS IN UTERO.

By JAMES WHITEHEAD, M.D., Manchester.

ON March 25th, 1867, Mrs. D., in the ninth month of her second pregnancy, was seized, at 6 P.M., with severe abdominal pain of paroxysmal character, recurring at intervals of three to five minutes. Each attack was attended with an inclination to down-forcing effort, and hence appeared to indicate the near approach of labour.

I saw her two hours after the first seizure, and learnt that the paroxysms had steadily increased in severity and duration from the onset. For two or three minutes after my arrival, the patient was tranquil and half-dozing, the uterine tumefaction presenting its natural roundness and uniformity; but, while in the act of carrying the flat hand over the abdominal surface, a sudden shock of the system took place, followed immediately by the elevation of a tumour of the size of a fist on the left side of the umbilicus, very sensitive under slight pressure, and alternately increasing and diminishing slightly in bulk and tension. The throes were of an irregularly pulsating character; and the tumour, under the gentle grasp of the hand, felt as if caused by a succession of violent spasmodic plunges of a foot of the foetus against this part of the uterine wall. Sometimes I thought I could define the outlines of the foot as if embedded in the oval-shaped tumour. After the commencement of a paroxysm, the plunges, each one being succeeded by a very perceptible quivering motion, were repeated in rapid succession, once every four or five seconds during the first half-minute, then somewhat less frequently during the next half-minute, after which they diminished in force and frequency, and ceased about the end of the second minute, the local tumour at the same time subsiding, and merging itself in the general uniform rotundity of the abdomen, as it had appeared during the preceding interval of quiescence.

The patient, on the subsidence of the paroxysm, was greatly exhausted, drowsy, and disposed to slumber. Her skin was bathed in cold perspiration; the breathing was slow, with occasionally deep sobbing; the circulation was languid; pulse 64, small and feeble.

The lower section of the uterus, now examined for the first time, could be felt above the brim of the pelvis, but not protruding within it. The uterine orifice was not dilated nor dilatable; the cervix, though short, was still tubular and unoccupied. The foetal head could be felt through the uterine walls on each side, but its exact position was not

* I owe this statement of Dr. Bener's experience to a communication from Dr. Unger of Davos am Platz.

clearly definable. The foetal pulsations were remarkably distinct stethoscopically, numbering 164 per minute during the interval of quiescence, the maternal pulse numbering at the same time 64.

At the end of four or five minutes, the patient having dozed during the interim, another attack came on with like severity as the preceding, the plunges being equally strong, rapid, and quivering, each attended by an involuntary scream, with general muscular shock throughout the frame. The foetal head, now slightly pressed into the brim of the pelvis, the cervix uteri being unaltered, was felt through the uterine walls to be rapidly rotating from side to side, the sagittal suture passing over the finger twenty or thirty times during a single paroxysm; the rotations, quick at first like the plunges, gradually becoming less frequent, and ceasing with the discontinuance of the plunges and subsidence of the local tumour.

With the stethoscope on the abdomen during the latter part of the next quiescent interval and until the arrival of another attack, I was enabled to notice that, in the seizure which followed, the foetal heart's action became immediately accelerated, rising in frequency from about 164 to upwards of 180, being sometimes uncountable; the maternal pulse at the same time lessening in volume, and sinking from 64 to below 60. These varying movements of the two circulatory systems of mother and foetus respectively, maintained their relative changes throughout the more violent prevalence of the paroxysms, the disparity decreasing with the waning severity and frequency of the seizures.

The attack lasted five hours—from 6 to 11 P.M. Gradually aggravated from 6 to 8, the commotions seemed to be most severe from 8.30 to 9.30; after which time, probably from the effects of remedies administered, they perceptibly abated, and at 11 ceased altogether.

Chloroform, in moderate doses, had already been given by inhalation before my arrival, and had been effectual in mitigating the suffering; but it is probable the subsidence of the convulsions was mainly due to the effect of anodynes administered to the mother, and conveyed through that medium to the foetus. At 8 o'clock, thirty minims of nupentha (a remedy she was known to bear with comfort and relief) were administered, followed by chloroform, to tranquil slumber, which was maintained half an hour. She was allowed to awake at 8.30, when another dose of thirty minims was given, followed again by chloroform. After this, a similar dose of the anodyne was repeated every half-hour to the sixth dose at 10.30; each dose being followed by chloroform until this hour, when the anæsthetic seemed to be no longer required, the convulsive movements having much diminished in force and frequency. At 11 o'clock, when the foetal movements seemed to have lost their convulsive character, the patient fell into a deep tranquil sleep, which lasted uninterruptedly six hours, and afterwards at intervals for several hours longer; a little liquid food being given at each waking interval. The quantity of nupentha administered was three drachms in the space of three hours. It is probable that the anodyne would have been more speedily effective administered *per anum*, could it have been retained; but one trial in this way was unsuccessful, the dose being rejected immediately.

On the following day at 11 A.M.—seventeen hours after the first paroxysm, and twelve hours after cessation—the foetal pulsations numbered 140 per minute, the maternal pulse at the same time, with augmented force and volume, having risen to 68. Twenty-four hours later, no irregular intrauterine movements in the interim, the foetal pulse numbered 136, that of the mother still 68.

From this date, the patient remained comparatively well, though greatly enfeebled—the foetal movements being felt only in the ordinary way—until delivery on April 15th, twenty-one days after the intrauterine paroxysms. The labour-pains were severe, and of normal character, for five or six hours, when, finding that the head did not enter the brim of the pelvis, and corrugation of scalp being perceptible at each effort, delivery was with some difficulty effected by means of the forceps; the child, with unusually large head, firmly ossified, being healthy and vigorous. No convulsive tendency has been thus far manifested, now thirty-five days; and the mother is able to nurse without extraneous aid.

A salient, if not the chief, noteworthy circumstance in connection with this case, would seem to be the condition of the circulatory systems of the mother and foetus respectively, as manifested throughout the attack. The convulsive paroxysms could not have been due to unwonted vascular plethora about the nervous centres of the foetus as a result of dynamic agency from the side of the mother; for, in her case, the nervous tone and the circulatory force (from causes to be mentioned) were remarkably subdued, and became still more so during each paroxysm. Even the anæsthetic insensibility made no difference in this respect; the acceleration of the foetal and depression of the maternal pulse being the same during the unconscious as during the volitional state. It is highly probable, indeed, that states of great excitation of the maternal circulation—whether, from violent and sudden emotional agencies, or

acute disease, or the infliction of injuries, if unaccompanied by great or continued mental perturbation—seldom, if ever, affect directly the foetus *in utero* by vascular plethora; the effect of the increased impetus not reaching beyond the maternal portion of the placenta. Cases confirmatory of this position, such as the following, are of sufficient frequency.

Some years ago, a poor woman, in the sixth month of pregnancy, fell from an upper story to the ground, sustaining thereby severe concussion of the brain and double fracture of the forearm, for which she was treated in hospital. Violent reaction ensued, with delirium, for several days. Her recovery, however, was complete in the space of a few weeks, no uterine disturbance having occurred; and she was delivered of a properly developed child, in health, at the full period of gestation.

In another instance, a woman, seven months pregnant, had a heavy fall down an area, which resulted in stellated fracture of the parietal bone, with depression, for the relief of which the trephine was used. She was insensible five or six days, with very violent reaction, but recovered favourably. The process of gestation was not in the least disturbed; and she was successfully delivered, at the full term, of a well-developed child, whom she was able to nurse, as on two previous occasions.

One other case bearing on this point may be cited. A young wife, 27 years old, muscularly and nervously vigorous, with free circulation and florid skin, aborted with her first four pregnancies at the end of the fifth month. On each of these occasions, the event had been preceded for ten or twelve days by abdominal distension and throbbing, feverish excitement, and at the same time enfeeblement of the foetal movements; then their entire cessation three or four days previous to the advent of hæmorrhage and expulsion. The foetus, in each instance, was anæmic and shrivelled. I saw her for the first time about four days before the termination of the fourth of these events, when the foetal movements were no longer perceptible by the mother. The foetal heart, however, could be heard beating, feebly, at the rate of about 96 per minute.

In her fifth pregnancy, quickening took place at seventeen weeks; and for ten days afterwards the foetal pulsations were at first 150 per minute, increasing daily in loudness, and lessening in frequency to 146. The maternal pulse at this time was 84. At about nineteen weeks of pregnancy, abdominal distension and throbbing began, as on previous occasions, attended with feverish excitement. The foetal pulse was 140; that of the mother 90. On the following day, the abdominal distension and throbbing having much increased, the foetal pulse had sunk to below 100; that of the mother being 96. She was feverish, inappetent, and thirsty. A day later, the foetal pulsations were very feeble, numbering 86 per minute; the maternal pulse had risen to 110. A quick venesection, to the amount of about sixteen ounces, was immediately followed by relief; her pulsations sinking from 110 to 96, and those of the foetus rising from 86 to upwards of 120 before my departure from her bedside. Three days later, the foetal pulsations numbered 146, and were much improved in tone; the maternal pulse being 90. But, as the abdominal distention and throbbing had not entirely ceased, another venesection was practised to the amount of twelve ounces, after which she remained comfortable during the rest of her pregnancy. The child, born at full term, was well developed and healthy.

In neither of these cases was the foetus disturbed by convulsive movement; nor had the process of intrauterine nutrition been interrupted in the first and second, and only very transitorily in the third; the perturbing cause in the latter instance having been removed by phlebotomy. It is very clear, in my belief, that, had the stimulating plan, of late so fashionable, been adopted in this case, the result would have been unsatisfactory.

It is not improbable that, whenever premature fatality occurs under the operation of these and similar agencies, *i.e.*, from high vascular excitation, or plethora of the maternal circulatory system, such result is due to placental apoplexy, and that death of the foetus is caused by anæmia. In the event of such an accession of symptoms occurring in the latter months of pregnancy when the foetus is viable, the state of matters being notified by free external hæmorrhage, delivery should be effected as speedily as practicable for the mother's safety, and also, by this procedure, the child may possibly be saved, especially if the placenta be not implanted too low to interfere with free and deliberate manipulation.

When placental separation takes place during a natural labour at full term, (an event by no means uncommon) the effusion of blood, which is extremely rapid under such circumstance, sometimes amounting, in the space of time occupied by the intervals of two or three pains, to several pounds, delivering by forceps, or turning should be immediately effected, otherwise the patient may die undelivered. It may be further observed that internal hæmorrhage occurring under such conditions does not usually give external signs of its existence, by reason of the orifice of the uterus being closely occupied by the head or other

bulky part of the foetal body; there need be no difficulty in detecting it, however, (1) by the sudden appearance of an abdominal tumour elevated above, and having a smaller segmental rotundity than the general uterine tumefaction; (2) by intense cutting pain in the situation of the newly formed tumour, and its exquisite tenderness under pressure of the hand; (3) by the notable diminution in volume of pulse, and signs of sinking.

It seems to be otherwise, however, as regards the foetus *in utero*, when the mental system of the mother becomes unbalanced by violent and sudden shocks of anguish or by prolonged and severe anxiety, attended with waste of physical power. The subject of the present case had assiduously and pertinaciously nursed an only child, twenty months old, through a severe attack of acute disease, which lasted nearly three weeks. When, at the end of this period, a favourable change in the child's condition took place, and the mother became convinced that all danger as to his safety was at an end, she fell prostrate, utterly subdued, and almost unable to move; and while she was in this state, the attack of intrauterine convulsions occurred, as already related.

A CASE OF FEVER, WITH CEREBRO-SPINAL ARACHNITIS.

BY JOHN W. TROTTER, Esq., Assistant-Surgeon, Coldstream Guards.

PRIVATE G. R., aged 24, 2nd Battalion Coldstream Guards, stationed at Beggars' Bush Barrack, Dublin, of six years' service, a fine muscular man, was admitted into hospital on May 17th, 1867. He had frontal headache, hot skin, and furred tongue. On the 20th, he became very anxious about his illness; there was great prostration; his face was flushed; he had a tendency to delirium; and complained of much pain in his legs, which, he said, felt tense and swollen. This was not so. On the 22nd, there was an increase of delirium; he started in his sleep. On the 25th, he had slight internal strabismus and ptosis of the left eye; bowels costive; no albumen in his urine. He appeared to improve from this up to June 8th, when he passed his evacuations in bed, and was rather purged. The latter symptom passed off and did not return. He subsequently required the daily employment of the catheter. He became stupid and lethargic; was roused with difficulty; and was constantly "patting" his head or chest with his right hand. On June 20th, his head was drawn back, and he appeared impatient of its being moved.

From this time up to his death, he became more and more insensible; the bowels continued costive; he had occasional attacks of vomiting; the eyes became congested; there was a thick secretion of mucus from the conjunctivæ, especially from the left; and the left pupil was smaller than the right. The head was retained in the same position. Small vesications appeared on the body and legs, apparently from pressure, and the skin had given way over the hips and sacrum. There never were petechiæ, of any kind. The pulse was rarely above 100. He took daily large quantities of milk and beef-tea, some wine, and brandy and water with eggs beaten up in it; but his powers of vitality gradually decreased; and he died extremely emaciated at 3 P.M., July 2nd, on the forty-sixth day of the disease.

Pulse, and Temperature in Axilla, taken by Assistant-Surgeon Farguharson.

	Pulse.	Temp.		Pulse.	Temp.
May 18, 10 A.M.		102.2	May 25, <i>Vespere</i>	104	100.1
" 19, "	84	101.3	" 26, 10 A.M.	104	100.3
" 20, "	80	100.3	" 27, "	100	100.2
" 21, "	76	100.4	" 29, "	96	100
" 22, "	64	100.1	" 30, "	104	99.3
" 24, "	80	100.1	June 1, "	100	99.1
" 25, "	88	101			

AUTOPSY (twenty-four hours after death). There was great vascularity of the integuments and pericardium over the top of the head. The calvarium separated from the dura mater with unusual difficulty, the membrane being very vascular; the knife was required to separate the dura mater and its arachnoid lining from the vertex of the brain in the neighbourhood of the Pacchionian bodies. The infundibulum was divided in removing the brain, and from three to four ounces of semi-transparent fluid escaped. On section, the puncta vasculosa were unusually marked; the brain-substance was firm. In the lateral ventricles, the serous membrane covering the corpus striatum in each was rendered semiopaque and thickened, by a semitransparent yellowish deposit, like semiorganised lymph; this left the internal or serous surface smooth and bright, but the cavity still contained some semitransparent serous fluid. At the base of the brain, the arachnoid covering the medulla oblongata

and the lateral lobes of the cerebellum was white and opaque; and this appeared to depend on the organisation of inflammatory products on its external surface, as the inner surface was smooth and bright, with the exception of a few shreds of lymph-like deposit attached to the part covering the medulla, and which could be removed with the handle of the knife. In the chest, the contents were found normal, except lobular pneumonia of the lower lobe of the left lung, with slight pleuritis of recent origin. The heart appeared normal. There was a white patch in the front, of the size of a sixpence. The right ventricle contained a de-colourised clot of considerable size, and the auricle was filled with blood-clot. The left ventricle and auricle were empty.

IRISH PURPURIC DISEASE AFFECTING SPORADICALLY SEVERAL PERSONS AND A PIG, AT KINGSTONE, NEAR HEREFORD.

By CHARLES LINGEN, M.D., Hereford.

THE group of cases given below, which have just been brought under my notice, and to which I think I ought to draw the attention of the profession at this time, and of those gentlemen especially who are now making this purpuric malady the object of careful research, are individually so incomplete (having been almost deprived of professional observation), that they would be valueless, did not this assemblage of facts, collected with the greatest care, taken as a whole, and in connexion with numerous cases occurring in Ireland, give to the group a special significance; as will be seen, I think, by a careful consideration of it in comparison with those cases.

Though none of my cases, not even the fatal one, were very acute in their nature, and exhibited little cerebral excitement, yet most of them coincided in presenting the essential features of the purpuric disease, especially one of the cases, where the purple spots were well marked: in the pig, also, they were exhibited to the fullest extent. The sporadic character and precarious contagiousness have been equally demonstrated in the Irish cases.

Rough Notes taken on the Spot, July 11th, 1867. The pig, eight months old, had been in possession of Mrs. Seal five weeks; it was purchased, and was reared in the village (Kingstone). First observed to be ill on the 19th of May; was killed on the 30th, because considered to be dying; first observed to be "stiff", then drowsy, and so continued most of its time, never exhibiting any excitement. On the following day, distinct purple spots appeared in abundance on the belly and inside the thighs; then on the back, and a little on the sides; lastly, on the nose and face. The animal took very little food, was never sick, and had a peculiar odour; was generally warm, though it often shivered during the first few days—less towards the end. It was killed by a butcher, when too weak to get up or to stand; and it was remarked, that its blood did not coagulate. The carcase was not opened. Two other pigs, cotted with it during most of its illness, did not take the disease.

A servant girl, Mary Davis, aged 16, was first taken ill about the 21st of May. She often went to the pig, but did nothing for him. She had slight chills; was very drowsy; had headache, but not very severe; the skin was very hot (not red); no spots; much sweating for several days. She was very weak, but not so debilitated as to compel her to keep her bed wholly for the nine or ten days she remained at Mrs. Seal's. At the end of this time, she went to her own home in an open gig, a distance of six miles. She remained there ill a month. She then returned to her service, scarcely up to her work; and at this time, two months from the attack, is feeble and anæmiated.

Mrs. Seal, the landlady, who often visited the sick pig in his cot, which was close to her back door, was taken ill about the 28th of May, with great drowsiness; dry retching; she was often very faint; pain in both temples, which was neither constant nor very severe. The tongue was said to have been dry, and not furred. She had great thirst; skin always hot, whether perspiring or not; and she "felt very hot inside". Eventually she had much sweating by day, and especially at night. The bowels were always regular; urine not remarkable. She had a very large purple spot on the loins; one, not so large, on the outer part of the thigh; and many others, smaller, in various parts. The nails and finger-ends were often purple, but not cold. Perhaps the most prominent symptoms in this case, as in the late C. Powell's, was great pain in the right upper arm to the elbow, scarcely implicating the joint itself; this was severe at first, and kept on nearly a month, the arm being of a deep red colour most of the time.

The cowman, Charles Powell, aged 46, a man not in strong health, but in his ordinary condition on the 30th of May, when he carried the