

others were from 18 to 38 years of age. In one of these there was profuse hæmoptysis, no diarrhœa; in another, profuse diarrhœa, delirium, no hæmoptysis; in the others, simply tubercular expectoration.

*Twenty mixed cases, with diarrhœa.*—Of these, fourteen were from 6 months to 6 years of age. In four or five of these cases the diarrhœa appeared first, then subsided, and was followed by inflammation of lungs; two of these cases, twins, died; in the others, the affection of bowels and lungs came on together.

Six cases, from 8 to 50 years of age: three of these were delirious, with livid complexion; in two, the diarrhœa very violent.

Four cases of inflammation and congestion of liver, from 70 to 75 years of age.

*Six cases of hæmorrhage.*—All women. Four of these cases were uterine, of which, three were previously liable to it; the other had been debilitated by suckling; one case of hæmatemesis; one of hæmorrhage per anum, no piles.

Three cases of profuse leucorrhœa.

Four cases of acute rheumatism, accompanied by gastric disorder.

Three cases of quinsy; one of these attended with considerable affection of lungs.

One case of catalepsy, with pyrosis.

Two cases of ophthalmia, with gastric disorder.

Four cases of erysipelas; one of these of the leg; the others of the face; all attended with gastric fever.

One case of puerperal peritonitis; died.

*Remarks.*—This summary of cases occurring in general practice within a fortnight of each other, under the same atmospheric influences, affords many points of interest for the consideration of the practitioner. In the first place, the influenza affects *all mucous membranes*, without exception; the mucous membranes of the bowels, lungs, vagina, and conjunctiva, are equally subject to its attacks. It has no peculiar and specific effect on the lungs, as many suppose. Two or more of these surfaces may be affected at the same time.

The severity of its attack is in a direct ratio to the youth of the patient, the mucous membrane of children being much more liable to a general affection than that of adults. Of thirty-two children under 6 years attacked, fourteen suffered from the lungs and bowels. Of thirty-six cases of adults, between 20 and 50 years of age, only two were mixed cases. The mixed cases were always the most urgent.

We observe, further, that of 36 cases of gastric disorder among adults, *there was not a single case of primary diarrhœa*; while of eighteen children under 6 years of age, in which there was gastric disorder, there was diarrhœa present in seventeen cases. This is very remarkable, and proves the extreme liability to this symptom in children. It is a fact of considerable importance in our consideration of the varieties and modifications of disease, and of the nature of the organic actions. It tends, also, to caution us against too great reliance upon mere symptoms. The same influence acting upon patients of different ages may, and does, produce directly opposite symptoms. Many of the children were affected with bloody diarrhœa.

It is further worthy of remark, that of the whole number of one hundred and ten cases that I attended, there were only five between the ages of 15 and 24, or during adolescence. One of these was a case of phthisis, one of catalepsy, and three were mixed cases of affection of the mucous membranes.

The comparative immunity of individuals between these ages from this epidemic influence is highly deserving our attention. One reason of this circumstance may be, that persons about this time of life do not so readily have recourse to medicine, and therefore do not come under the notice of the practitioner; at all events, it proves the comparative mildness of their symptoms.

Age, then, would appear to be an important element of disease.

Many cases of hæmorrhage and leucorrhœa were observed at the same time,—in fact, there was a general relaxation of the mucous membranes, with a hæmorrhagic tendency.

The cases of rheumatism that occurred were considerably modified by the gastric affection—a fact which I have since frequently observed; there was less redness of the joints, less acute fever, and the disease was more readily relieved.

Towards the termination of the epidemic, several cases of erysipelas and ophthalmia came under notice, and were doubtless attributable to the same cause as the affections of the internal mucous membranes: indeed, the disorder of these membranes partakes more of the *erysipelatosus character* than any other. It spreads rapidly over the surface, is attended with great prostration, and must not be actively treated. The concomitance of external erysipelas with this affection sufficiently indicates the identity of cause and pathological nature.

Previous to the occurrence of these cases, an epidemic of

typhus had prevailed; and many of the patients that had suffered under this fever, but who were convalescent, were afterwards attacked by gastro-enteritic inflammation, and some of them died. The relapse in these cases, as in most others that I have witnessed, was attributable to the state of the atmosphere. A relapse of typhus is generally attended with urgent abdominal symptoms: the prostration is sudden and excessive; and in my belief, deduced from observation, usually happens upon a change in the atmospheric conditions.

I may observe, that this epidemic prevailed extensively among cattle, and was very mortal: it seemed to attack these first—then the poor—and the rich last.

As there can be no question that the influenza is dependent upon atmospheric conditions, it is desirable to know what may be the peculiar state of the atmosphere causing so severe an epidemic. My notes inform me, that just previously to the appearance of the epidemic, the weather had been dry and frosty for a few days, and then suddenly changed to a damp fog. Precisely the same character of weather prevailed on the appearance of the present epidemic: we had been subjected for two or three days to a clear frosty atmosphere, and then a thick damp fog supervened, and ushered in the epidemic.

From notes that I have preserved of the epidemic of 1837, I find "that we had a severe frost, succeeded by moist weather." In 1832 the weather was the same, and, in both seasons, influenza prevailed.

My object in drawing attention to the state of the weather, is to suggest that this disease is dependent upon the barometric state of the atmosphere. When the atmosphere is charged with moisture it is specifically lighter than ordinary, and it thus prejudices the actions of the system. The moisture itself may prevent, to a certain extent, evaporation from the lungs and skin, and embarrass the system; but I do not believe that either the moisture or cold are the intrinsic causes of this disease. Much less are we to imagine that there is any peculiar poison in the atmosphere.

We have observed that a hæmorrhagic tendency was the principal characteristic of this disease; and experience assures us, that such a condition of the system is induced by a diminution of the pressure of the atmosphere.

Sancerotte says—"At the summit of the Vosges, wounds and ulcers bleed freely, and the formation of the clot in hæmorrhage is difficult: ophthalmias are very obstinate; catarrhal quinsies are very common and difficult of cure; hernias easily become strangulated, and metastases are frequent; pregnant females are subject to difficulty of breathing, and to floodings and miscarriages." M. Hippolyte Cloquet has corroborated these observations.

Now, it is remarkable that Sancerotte has enumerated the same diseases as resulting from rarity of the atmosphere, that prevailed during the influenza. There cannot be a doubt that the same cause existed to produce the same effects. When the atmosphere is laden with moisture, we have, in effect, the air of the Vosges.

I shall say little about the treatment of these cases: every practical man must be familiar with the complaint, and knows that the simplest treatment is usually the best. The chief point, however, is to keep the patient in a warm, dry room, and the disease, in a few days, will subside. I have a patient remarkably obnoxious to hæmorrhage and affection of the mucous membranes, and who I fully believed would be a sufferer from the epidemic, but who has yet escaped by being kept in an equable temperature. We thus correct the conditions of the atmosphere producing the disease; and as it is the simplest, so it is the surest method of cure. It is not, perhaps, so learned a plan as the calomel and opium, nor so active as a repetition of leeches and blisters, but it will be found more serviceable.

Kennington, December, 1841.

## SPEEDY CURE BY ABSORPTION.

By F. S. GERVIS, Esq. Surgeon, Tiverton.

As the following case may be interesting to your readers, as illustrative of the power of the absorbent vessels in accomplishing a radical cure in rather a novel manner, I shall briefly mention the particulars, which may throw some light on the treatment of diseases of the eye. About a month since, a labouring man waited on me, and informed me that he had received a blow on one eye by a stone two days previously, which had deprived him of its sight. He had applied a lotion to it, and thinking he should get better, had consequently delayed consulting me. On examining the eye, I found the anterior chamber filled with blood and lymph, to such an extent that the iris could not be seen at a single point; the pupil was so obscure that I could scarcely

discern it, and it was evident that he could see no object. He did not complain of pain in the eye, but there was some lachrymation. I directed him to return home, telling him that I would call in the evening, and apply the cupping-glasses to the temple. I was so engaged during the day, that I was prevented from seeing him, and sent a message that I would call the following morning, to cup him. He was provided with the requisite medicines, and I directed a blister to be applied behind the ear, to be dressed with strong savine ointment and cantharides plaster mixed. Early the next morning he came to my house, and on examining the eye, much to my surprise, I found the iris restored to its normal condition, and the sight of the eye perfect; there was nothing apparent but a slight dulness about the pupil, the cornea was transparent as if nothing had happened. The conjunctiva was deeply inflamed—an appearance which I had not discovered on the previous day. Observing the lids were covered with ointment, I immediately guessed that he had applied the strong blister ointment to the eye, and on inquiry, my suspicions were confirmed. It had deeply reddened the conjunctiva, but its effect on the cornea was decided, and almost instantaneous, as he could not have used the ointment until late on the preceding evening. I was wholly unprepared for such an event, from the condition of the eye when I first examined it, and thought it probable he would require constant attendance for the next fortnight. The experiment was one I should have deemed fraught with danger, in the application of a powerful stimulant to the cornea, and however contrary to the general routine of treatment usually adopted in such cases, it was evident that complete success was the result. The absence of pain in this case may be one reason why the *modus operandi* of this unusual practice did not prove injurious. I have known the strong savine ointment applied by mistake to the eye in another case under my care, without any ill effects following it. The question may be agitated, how far it may be admissible, in cases somewhat similar to the one I have named, to try the stimulant plan at an early period, instead of depleting, mercurializing, &c. The use of the ointment of nitrate of mercury, or calomel dissolved in spirits of wine, or the ointment of iodide of lead, are powerful agents in exciting the absorbents to action. It is certain that where active inflammation exists, such practice would not be safe, but prejudicial. In cases of chronic ophthalmia, particularly in scrofulous constitutions, where there is a sluggish action of the vessels, opaque cornea, or deposit of lymph in the anterior chamber, it is a common practice to brush the lids with some stimulating application, in conjunction with keeping up counter irritation by a blister. In this class of complaints, the tincture of iodine applied freely on the upper lid exercises a beneficial influence in the curative process, in subduing subacute inflammation, and giving a healthier tone to the minute vessels of the eye. The case of my patient is one which goes to prove that the eye will bear the application of a powerful stimulant without injury, and that the principle of such a treatment may be tried with advantage at an early period, in certain forms of diseased or disturbed functions of that organ.

Tiverton, Nov. 18, 1844.

#### SUGGESTIONS RELATIVE TO THE CAUSE OF SLEEP.

By WILLIAM SMITH, Esq. Surgeon, Clifton.

SLEEP appears to depend on a retardation of the circulation through the brain, thereby producing a venous condition of the blood in that organ, and this diminished or retarded circulation may probably depend on a periodic exhaustion of the propelling powers of the heart. The proofs of the first portion of this proposition are many, and I think satisfactory.

First. Venous congestion of the brain, from any obstacle to the return of the blood, will produce drowsiness, stupor, coma, and, finally, apoplexy, if its intensity be sufficiently great.

Second. In sleep, respiration and circulation are performed more slowly than in the waking condition; hence a change in the blood of the brain does not occur so frequently.

Third. Animal heat, and its causes, respiration and circulation, are feeble in hibernating animals during their winter sleep.

Fourth. The adult, in whom the respiratory and circulating systems are at the maximum of development, takes less sleep than the infant, in whom the nutritive or glandular system is in full activity, but in whom the respiratory functions are at their minimum.

Fifth. Motion, with its tendency to increase circulation and respiration, prevents sleep.

Sixth. Hence an easy and quiet position of the body, and all the means which tend to favour a tranquil circulation, are incentives to sleep.

Seventh. Hence the whole class of sedative remedies eventually produce slowness of the heart's action after a longer or shorter stage of stimulation.

Eighth. Hence the desire of sleep after exercise, as the circulation becomes so much slower after, in proportion to its acceleration during it.

Ninth. From the same cause, wine and all stimulants act primarily as excitants; and when their stimulation has subsided, the circulation becomes slow, slightly oppressed, and drowsiness supervenes.

Tenth. The same may be said of the warm bath, the pulse at first rising, and subsequently becoming retarded.

Eleventh. Cold, applied to the head, rapidly lessens the circulation, and tranquil sleep is sometimes produced by this means in fierce delirium, and in violent paroxysms of insanity.

Twelfth. Motion is employed as a remedial means in obviating the effects of opium. We walk the patient about, and so keep the circulation excited, till the poison is got rid of, or its effects shall have passed off.

Thirteenth. Intense cold produces slow and retarded circulation, drowsiness, and coma. Hence the necessity not to allow persons exposed to its influence to cease from exercise, which supplies the necessary stimulation to the circulation. A celebrated surgeon, in describing the disastrous retreat from Moscow, says, "those who sat down went to sleep, and those who slept, awoke no more."

Fourteenth. Hence the amount of fat animal food which is not only eaten with impunity by those who are exposed to great cold, but is found to be absolutely essential to maintain the proper amount of circulation.

Fifteenth. We have sneezing and yawning as important illustrations of the effect of an accelerated circulation in preventing sleep. The sneeze is a forcible expiration, after which a deep breath is taken in; this, of course, produces arterialization and subsequent circulation of the blood. Yawning is a prolonged and deep inspiration, and in the same manner has the effect, for a time, of keeping up the attention, by furnishing to the brain a fresh amount of arterialized blood.

Sixteenth. Immersion in an atmosphere of carbonic acid, or in an atmosphere which contains a large proportion of it, will produce drowsiness, coma, and the sleep of death.

Seventeenth. Breathing oxygen gas, on the contrary, will produce acceleration of the pulse, and all the vital functions, and eventually delirium.

Eighteenth. In delirium, whether attended with symptoms of power or debility, whether of the sthenic or asthenic type, we have an accelerated pulse. In the former case, as we lessen the excitement by depleting measures, and in the latter, or true delirium tremens, as we obtain the same end by the use of narcotics, sleep gradually steals on the patient, and delirium ceases. In fact, our grand object is to lessen the rapidity of the circulation through the brain, and thus induce sleep.

I trust that these very imperfect remarks may call the attention of the readers of THE LANCET to this most interesting subject, and tend to elicit more observations on a point which, being closely connected with health and disease, is peculiarly worthy of investigation.

Berkeley-place, Clifton, Sept. 1844.

#### INDIAN HEMP IN TRAUMATIC TETANUS.

By H. G. POTTER, F.L.S., Surgeon to the Newcastle Infirmary, and Lecturer on Surgery at the Newcastle-on-Tyne School of Medicine and Surgery.

THOUGH the attention of the profession has been frequently directed to Indian hemp as a medicinal agent in the treatment of spasmodic affections, I believe that its powers are not yet sufficiently appreciated. If, therefore, you will allow me a small space in your valuable publication, I will mention a case in which I lately tried this medicine with marked good effect.

A young man, while engaged at his work, Oct. 29, 1844, became entangled in the belt which moved a large wheel, and thus received a severe laceration on the upper part of right thigh, exposing the femoral vessels. He also received several other injuries. He was immediately brought to the Newcastle Infirmary, when the usual treatment, in such cases, was adopted. The case proceeded most favourably until the twelfth day, when symptoms of tetanus appeared. A large dose of calomel and Dover's powders was then given, and as no good effects followed, I ordered him to have ten grains of extract of Indian hemp, and to repeat the same dose every two or three hours, if required. I saw him again in a few hours, and finding that his bowels had not been acted upon by some purgatives he had taken, ordered two drops of croton oil to be placed on the tongue, and the fol-