but a short time after the death of the last case, having crushed his great toe under the wheel of a locomotive engine. The soft parts were much contused and lacerated. Upon the tenth day after the accident, he experienced some difficulty in opening the mouth, and this increased by the evening, when spasmodic rigidity of the jaws was noticed. He was ordered a turpentine injection, and subsequently a drop of croton oil, and fifteen minims of the tincture of cannabis Indica every three hours.

On the next day, he had occasional twitching of the injured leg; pulse 80 to 90; has no power of emptying his bladder; toe sloughing; pain in the line of the absorbents, and in the femoral glands; bowels much confined. The great toe, with the head of the metatarsal bone, was removed under the influence of chloroform, after a consultation on the case. The foot was lightly dressed afterwards. He was ordered to take thirty minims of the tincture of cannabis every two hours.

In the evening he was decidedly improved. The pulse fell after the operation, and he opened his mouth better. The abdominal muscles were relaxed, and his bowels open. He was ordered to have an ounce of wine every three hours.

On the day after the operation, there was some difficulty in swallowing. The pulse was about 100. He was ordered to take another drop of croton oil. The quantity of wine was increased, and he was ordered some quinine. The wound was in an unhealthy state without suppuration. He complained of some difficulty of breathing and tightness about the chest.

In the few following days, the chief change in his state was an increased rapidity of the breathing, while the pulse became slower; he had opisthotonos, great rigidity of the abdominal muscles, and frequent spasms. The inspirations were thirty in the minute.

During the fifth night after the onset of the disease, he was kept partially under the influence of chloroform; and it was found that thirty minims administered on a sponge produced rapidly the effect of soothing pain, and bringing on a quiet and apparently natural sleep, from which he was easily roused. He took nine drachms during the night, and appeared depressed in the morning, the pulse being much slower.

In this way he went on for nearly a week. The tetanic symptoms gradually yielded, and at last he had few or none, and he could open his mouth tolerably freely. The chest symptoms became much worse, and it was evident that he had inflammation of the lungs, for which he was treated, but without avail. He died on the morning of the fifteenth day after the first symptom of tetanus.

At the *post mortem* examination, he was found to have pleuropneumonia of the lower part of the right lung, with some consolidation of the left lung, and congestion of the pulmonary mucous membrane. The membranes of the brain were also congested.

CASE V. The last of this series of cases occurred in the person of a lad whose right foot was caught between two rough heavy rollers at the Cotton Factory, and was much lacerated. The skin was torn from the back of the toes and metatarsus, the tendons were much scratched, and one of the joints of the middle of the toes was laid open. The wounds were dressed with water dressings, and he was allowed full diet.

On the fifth day after the accident the wound looked very sloughy, and a poultice, with a chloride lotion, was ordered. During the next two days he suffered from spasms of the leg, especially at night, and was not able to sleep. He looked anxious and depressed. Pulse quick, and skin hot. The nurse's attention was drawn to him in the night by his crying, and she found him with his leg spasmodically drawn up, so that the knee was bent at an acute angle. The wound was very unhealthy, and he had enlarged and painful glands in the femoral region, and pain in the course of the absorbents. The spasms of the muscles of the thigh and leg came on now and then, accompanied with great pain. I removed the toes and metatarsus with the pro-

jecting anterior extremity of the internal cuneiform bone, under chloroform. Two or three vessels required ligature, and I introduced five sutures, bringing the flaps well together. He was ordered to take twenty drops of laudanum every four hours. The day after the operation he complained of the foot; the pulse varied from 100 to 120, and he had a few spasms, the leg being drawn up now and then. In the evening I loosened the bandages and removed the sutures. He took one or two doses of castor oil, as his bowels were much confined, and some Dover's powder at night, and three days after the operation the spasm ceased. A little redness extended up the ankle. Urine excessively alkaline, with a deposit of phosphates. To remedy the erysipelatous condition, and to relieve his general state of depression, I ordered him twenty drops of the tinctura ferri sesquichloridi three times a-day, and from this time his progress towards cure was uninterrupted.

REMARKS. In the first of these three cases in which an operation for the removal of the injured parts was performed after the onset of tetanic symptoms, the disease was so severe and acute that there was no time for treatment. The patient only lived thirty-six hours from the time when the jaw became fixed, and he only swallowed a few drops of wine when partially under the effects of chloroform, immediately after the operation. In such a case, I believe an operation to be quite useless, for the entire disease is suddenly and rapidly developed to a degree that is quite out of the reach of remedies, and too much of the poison (if poison it be) has been absorbed to be eliminated from the system.

In the second instance, the treatment adopted, viz., the amputation, chloroform, and stimulus, undoubtedly checked the complaint, and the patient died apparently from pneumonia, and without any spasm. He had tetanus for fourteen days, and the spasms were entirely subdued. The condition of the lung found after death was not such as would have destroyed life, except in a person worn out by some such depressing cause.

In the third case, the spasms were very distinct, and were evident to all my colleagues: they were also local, for the patient had no trismus, and it is well known that in a certain proportion of cases the disease begins locally, and that the system generally is subsequently affected. After the amputation of the foot, he had scarcely any symptoms of a tetanic nature. He snapped his teeth together a few times convulsively in his sleep, but the evidence of trismus was not at all conclusive. It is well worthy of notice that in this boy, as well as in Mr. Morgan's case, there was distinct affection of the absorbents, and inflammatory enlargement of the femoral glands, and that, in all three cases, the tetanic symptoms commenced as soon as the injured part began to slough.

I believe that, in these cases of local tetanus, removal of the injured part under chloroform is an important feature in the treatment, and one that gives the best promise of success.

ST. MARY'S HOSPITAL.

CASES OF NERVE-DISORDER, RECORDED WITH REFERENCE TO THE PROBABLE OPERATION OF MALARIA AS A CAUSE.

By C. HANDFIELD JONES, M.B., F.R.S., Assistant-Physician to the Hospital.

[Continued from page 447.]

CASE V. J. O'C., female servant, aged 35 years, Irish, was admitted on July 16th, 1855, into St. Mary's Hospital. She has been ill two months with her present disorder, which commenced after exposure to cold and wet. She has had palpitation during the last eight years, on and off. Her general health has been good; she had hæmoptysis and evacuation of blood *per anum* at the age of 14; no other disease that she can recollect. Catamenia regular. She had excessive leucorrhœa for three months, which

ceased about two months ago. She is of light complexion, blue eyes, light hair; the aspect of her face is doughy. She complains most of excessive pain in right foot and shoulder, pain in head and sickness, with a good deal of perspiration. The pain in the foot, when most severe, causes nauseous taste and feeling. Tongue red at apex, coated at back and sides, tremulous; pulse 90, small; bowels constipated; urine copious. The heart's sounds are normal; the lungs appear healthy.

Sumat calomel. gr. iij horā somni, et haustum sennæ cras mane.

R Potassii iodid. gr. j; ammoniæ carb. gr. iij; decocti cinch. 3j. M. Fiat haustus ter die sumendus.

July 17th. She has been sick during the night; has vomited yellow acrid matter. She has been shivering, and had continual heats and chills. The bowels have been open once.

July 18th. Pain in præcordia; heats and chills, succeeded by perspirations, during the night.

July 19th. Less sweating; recurrence of pain in præcordia, and some in abdomen; tongue not clean.

July 23rd. She complains of palpitation, pains in loins, and everywhere. She has been retching constantly, but does not eject anything. Cardiac and pulmonary sounds normal.

July 27th. Slight ejection of blood from the mouth occurred last night.

After this date, I did not see her again till August 15th, when she gave me the following account. She had been bringing up blood every day since the last date. It came up with a little short cough, not with sickness, for the first two weeks, to the amount of about a teacupful a day. She used to begin at 2 P.M. most days, and continue all the evening and much of the night, bringing up the blood in mouthfuls. The blood I saw this day was small in quantity, blackish, acid, and mixed with a little mucus. Her food had not digested very well for some time; she complained of much sinking and faint sensation at the epigastrium, where there was much tenderness until she was dry cupped two days ago. There was clear and full breath-sound in both fronts. The liver was not manifestly enlarged or diminished. Nothing morbid in the throat. She had taken, during the interval of my absence, infusion of roses with sulphate of magnesia, acetate of lead with acetate of morphia, and gallic acid. One blister had been applied to the left hypochondrium, and another to the sternum. Her present medicine was one ounce of infusion of roses, with five grains of tannic acid, three times daily.

Aug. 18th. Her pulse was 87, small, and weak; skin moist and cool; appetite very bad. She had cold perspirations.

R Quinæ disulph. gr. iij; acidi gallici gr. v; acid. nitrici mij; liquoris opii sedat. miv; aquæ 3j. M. Fiat haustus ter die sumendus.

Aug. 20th. She has vomited less.

Aug. 23rd. She looks better; the sanguineous ejection is much less. The medicine was continued, and she was ordered to have 3iv of port wine.

Aug. 25th. The sanguineous ejection is more abundant every other day; to-day it is slight. She feels better. "The chest is not at all so bad."

R Quinæ disulph. gr. v; acidi sulphurici dil. ℥x; decocti cinchon. 3j. M. Fiat haustus ter die sumendus.

Aug. 26th and 27th. No blood was brought up.

Sept. 1st. Very slight sanguineous ejection occurred yesterday in the morning; none to-day. She still perspires much. There is less of the very great sinking at the epigastrium. She wishes for meat. The wine does much good. The mixture was ordered to be taken four times daily.

Sept. 2nd. The catamenia are very profuse.

Sept. 5th. There is some diarrhœa.

Sept. 8th. The catamenia have ceased; she feels better; no blood brought up during the last two or three days. The left side has been neuralgic since yesterday.

Sept. 9th. A little blood was brought up.

Sept. 12th. She is gaining strength; is much improved in appearance.

Sept. 19th. She continues improving in appearance and strength; no blood was brought up since last report till to-day, when it was mixed with phlegm.

Sumat quinæ disulph. gr. x ter die.

Sept. 21st. Yesterday she had an attack of trembling all over, followed by severe palpitation; she has a good deal of cold chilly feelings, succeeded by heats and much perspiration; much noise in ears; tongue dry in middle; no appetite; no thirst; bowels not open; head giddy; pulse 93, of good force; no blood brought up. The quinine was omitted. Calomel and a purge were given, I think.

Sept. 22nd. Not the least enlargement of liver or spleen; tongue moist and nearly clean; bowels open. Some sanguineous vomit occurred last night. The cold douche was employed in the morning.

Sept. 24th. She brought up some jelly-like matter from stomach.

Sept. 26th. She felt very ill yesterday, and threw up "thick stuff" mixed with blood. Feels much better to-day: no sickness; pulse exceedingly weak. Has alternations of hot and cold feelings, and perspires very much. Tongue clean and natural.

Oct. 1st.

R Tincturæ ferri sesquichloridi ℥x; infusi quassia 3j. M. Fiat haustus ter die sumendus.

Oct. 3rd. She felt rather sick yesterday, about 2-3 P.M., and brought up about 3vi of blood, bright (she says) at first, but now dark, not acid. She has the same shivering feelings and perspirations. The catamenia have just ceased; they lasted three days.

Oct. 6th. Yesterday she had good appetite, and felt well till about 5 P.M.; she then began to feel chilly, and could not take her tea. About 6, she began to bring up blood, and continued to do so till 9. She got warm after the chill, and was so during the night, feeling very ill, with much palpitation and trembling. There is much soreness at the epigastrium and lower sternal region, more when blood comes up. The blood seemed yesterday to rise up of itself, without cough or vomiting, but with some nausea. In quantity it equalled half a pint; it is neutral and blackish.

Oct. 12th. She has had a bad toothache the last three days, preventing sleep at night; has not had it before for two years. No blood has been brought up since the 7th. She has been sick, vomited "only watery, and afterwards brown stuff". Last night she had very great sinking at stomach, and pain in loins.

Soon after this she went to the Convalescent Asylum at Carshalton, where, during her month's stay, she gained a good deal of strength, but still had shivering often, and brought up blood three times. When she returned to town, she lost her appetite.

Nov. 17th. She brought up a pint of blood in two or three attacks, and again on the 21st brought up "a lot of brown stuff by vomiting"; before this she was shivery, cold, and low spirited.

Nov. 24th. She came under my hands again as an out-patient. I ordered the following medicine:—

R Ferri et quinæ citratis gr. x; spiritus ætheris chlorici ℥xx; aquæ 3j. M. Fiat haustus ter die sumendus.

Under this she improved, and had much less hæmatemesis. There was slight recurrence on December 10th, severe on 20th (three-quarters of a pint), very little on January 6th, and then none till she went to service (Jan. 19th) in the capacity of cook. The citrate of quinine and iron was changed on January 9th for the following:—

R Quinæ disulph. gr. iij; tincturæ ferri sesquichloridi ℥xv; acidi muriatici mij; liquoris opii sedativi miv; aquæ 3j. M. Fiat haustus ter die sumendus.

Jan. 10th. She had neuralgia in the left side, "like a knife". The mouth was parched with thirst at night. On the whole, she was a great deal better.

Dec. 8th. She had rheumatism in the feet. She went to service unwillingly, at the desire of others, not thinking herself that she was fit for hard work. The result may be best told in the account I received from her mistress, whose suspicions of habits of intoxication were evidently aroused. "Yesterday (Jan. 21st) she was taken ill; she appeared completely stupified; spoke as though her tongue were too large for her mouth; reeled in her walk; fell off her chair; and, after a long, *extremely sound* sleep, seemed somewhat recovered, and got to work again. To-day, by one o'clock, she is very little better."

I saw the patient again Jan. 30th. Her own account was, that the work of the place had immediately knocked her up; that she brought up blood again immediately, and had ever since. Appetite lost. She felt bewildered in the head at times, and forgetful. I gave her the same medicine as before.

Feb. 20th. She has only brought up blood once since the 2nd; has attacks two or three times a day, in which she almost faints, and loses her sight; and feels bewildered, with "deadly sensations" at the same time, and cold perspirations. I gave her, besides the mixture, five drops of Fowler's solution three times daily with her meals. She continued in much the same state, and left for Ireland on March 5th. I examined her chest then, and could find no evidence of anything morbid in the lungs or heart.

REMARKS. Long and tedious as this history may be, I think its perusal will repay the reader. It shows a number of morbid phenomena, such as might and do occur separately, springing up rapidly one after the other, and without any manifest interdependence. I reject at once the hypothesis of the symptoms being dependent on any organic lesion of the heart, lungs, or stomach, for none such was detected, and the general character of the disorder was very unlike anything that is seen in such cases. There remains only the view of aguish disorder which can explain the phenomena, and it does so fully. The system was under the influence of a depressing poison, operating primarily on the nervous organs. This caused the neuralgia, the toothache, the cerebral disorder resembling intoxication, the bewildered feelings, the forgetfulness, and loss of sight, by its action on the animal nervous system; while, by affecting the organic, it produced the hæmatemesis, the syncopic attacks, the aguish paroxysms, and the sinking at the epigastrium. Not the nerve tracts only, but the centres, seem to have been affected; both the brain and the solar plexus appear notably to have felt the palsy influence. The periodicity of the hæmatemesis, and its being checked by quinine, testify to its peculiar character. The immediate relapse on recommencing work is exactly what is observed in neuralgia and other nerve disorders; the symptoms which remain in abeyance during rest are immediately reproduced by exertion. The cause of this seems to be, that the nervous power is so feeble that a slight expenditure of its energies immediately exhausts them, and leaves them unable to resist the morbid cause. I believe in inveterate cases, such as this, the air of a high and dry locality is absolutely essential to cure. Medicine is of some avail, but not to cure, while the morbid influence is in operation; and after removal from its sphere, medicine is often unnecessary. How puzzling and inexplicable such a case as this would be, if not regarded from the right point of view.

CASE VI. Jane H., aged 39, single, of rather large and tall make, was admitted on Nov. 14th. She states that her father was very nervous; and that, as a child, she used to have epistaxis frequently. She had been ill about a year, and was getting worse. She thinks her illness was brought on by witnessing almost alone a fearful death-bed. She acts as visitor of the poor under a clergyman in this neighbourhood. The face is flushed, and red; bowels regular. She cannot eat anything; food goes against her stomach. Tongue white. The catamenia have been absent for the last two months. She cannot sleep except for an hour, after which she is awake by perspirations. Pulse pretty large, rather soft. Urine rather high coloured, and sedimentary. Head rather warm. She complains of extreme debility and depression,

with frequent paroxysms of shaking, affecting all the body more or less. She can hardly speak sometimes. The shaking, when I saw her, appeared as a constant muscular trembling, not like chorea; the arms were most affected. She has some sharp pain in the right elbow. At night she has dreadful perspirations, and turns so cold, and has cramp. She took a calomel pill and black dose lately, and was much worse the next day.

Sumat morphis muriat. gr. ss omni nocte.

℞ Quinæ disulph. gr. v; acidi sulphurici dil. q. s.; aquæ ʒj.

M. Fiat haustus ter die sumendus.

Nov. 24th. The appetite improves. The opiate causes dreadful dreams, but she sleeps better. There is still very much tremulousness of the limbs. She had violent pain in the back and lower part of the trunk three days ago. Pulse exceedingly small and weak. Her hands shake so that I can hardly feel the pulse. Her teeth chatter. The legs are less affected. She has much pain and swimming in the head. She vomits on rising in the morning clear water and frothy fluid.

℞ Ammonis sesquicarb. gr. v; decocti cinch. ʒj; tincturæ cinch. ʒj. M. Fiat haustus ter die sumendus.

Sumat ferri carbonatis ʒj ter die.

Dec. 1st. Her head has been easier since the application of a mustard poultice. She has no sleep at night, from starting. She is altogether low, mentally and bodily.

℞ Strychniæ gr. 1-16; quinæ disulph. gr. iv; acidi sulph. dil. mvi; ferri sulph. gr. iv; aquæ ʒj. M. Fiat haustus ter die sumendus.

℞ Opii, camphoræ, aa gr. ij. M. Fiat pilula omni nocte sumenda.

Dec. 22. Some, but only temporary, improvement ensued. She is sad and tearful; and now she is sick after all her food. Tongue white, with some red papillæ.

Sumat assafœtidæ gr. x, in pilulis ij, tertius horis.

Dec. 29th. Much better; appetite better; hands much steadier. Head suffering. Pulse small and weak. The pills were continued.

℞ Infusi valerianæ ʒj; tincturæ valerianæ com. ʒj; zinci oxydi gr. iv. M. Fiat haustus ter die sumendus.

Jan. 19th. She is not improving. She has dreadful sinking at chest, and nausea. She has not half an hour's sleep at night.

℞ Hydrargyri chloridi gr. j; extracti aloes aquosi, gr. ij. Fiat pilula bis in septimanâ sumenda.

Sumat pilulas assafœtidæ secundis horis.

℞ Ferri et quinæ citratis gr. x; aquæ pimentæ ʒj. M. Fiat haustus ter die sumendus.

Jan. 20th. She is a great deal better; her hands are steady, and skin warm; more appetite. The mixture does much good. Her gait in walking is still so unsteady, that some of the patients who saw her walking to the hospital supposed her to be tipsy.

Feb. 9th. She is a great deal better; can walk better; gives me her hand steadily without shaking; face paler than it was; can take food better. She was discharged at her own suggestion, with directions to continue the medicine another week.

REMARKS. The prominent symptoms in this case were extreme debility and depression, disorder of the motor power, with nocturnal aguish disorder. Comparing the above record with that of pure neuralgia, it must, I think, be apparent that there are strong indications of the nervous centres being involved in the former in a way which they are not in the latter. The power of the cerebrum and cerebellum seems to me, in the above case, to have been notably impaired, the enfeebling of the latter occasioning the muscular trembling. The nervous system seems to have been weak from the first, as one may reasonably consider the epistaxis of her early life to have depended in part on a proneness to congestion in the nasal vessels, itself the result of want of tone in the accompanying nerves. This patient, like the preceding one, incurred the suspicion of being addicted to intoxication, though it was quite clear to me there was no ground for it. I saw her soon after her tottering gait had been animadverted on; and, though much dis-

tressed and annoyed by the calumny, she was evidently in full possession of her mental faculties. The assafetida acted, in my opinion, as a special stimulant or tonic to the encephalic centres; the quinine and iron performing the same duty to the ganglionic system.

CASE VII. M. H., aged 32 years, wife of a waiter, was admitted November 24th. She has suffered since the age of 17 with weak nerves. She had been suffering six months since her confinement; her child had been weaned six weeks. She was an in-patient for a month, and got better, but is now as bad as ever. She "feels regular bodily ill"; her senses leave her every now and then; she has extreme weakness; "no heart or spirit for anything in the world". She has no pain anywhere, but has much weight in the forehead. She has had no sleep last week. At various times she is conscious of all that is around her, but without power to act. While I was questioning her, she fell off the chair in a kind of fit: she did not struggle; her face was not pale. She soon recovered after a dash of cold water in the face; tongue a little white; bowels open; urine of usual colour and appearance; skin cool; pulse not weak, 72; lips rather congested. She is not a great teadrinker. From November 24th to December 15th she took the following medicine:—

R. Ammoniae sesquicarb. gr. v; tincturae hyoscyami mxx; infusi valerianae ʒj. M. Fiat haustus ter die sumendus.
R. Camphorae gr. ij; opii gr. iss. M. Fiat pilula omni nocte sumenda.

From the latter date to February 2nd she had quinine, at first seven grains thrice daily, afterwards ten, and the last three days fifteen grains. She took, besides, seven minims of liquor potassae arsenitis three times a day, from December 26th to January 16th; and, from January 23rd to 30th, ten grains of assafetida every three hours. From February 2nd to about 9th or 10th, when she went to the Convalescent Asylum at Walton, she had ten minims of Fowler's solution three times a day. The general result of this treatment was, that she benefited decidedly by the arsenic, but not by any other remedy. This was observed both times that it was given. Her symptoms throughout were much of the same kind, mainly pointing to the brain as the seat of disorder. She spoke of "losing her reason", having "lost and deadly feelings", recurring so frequently that the intervals were shorter than the paroxysms.

Jan. 30th. She reports that she loses her senses at times; "memory and eyesight and all seem to go"; she has "such a fever upon her before these attacks"; can keep them off for a time, but at last they overpower her, and she loses herself completely for about a quarter of an hour.

Feb. 2nd. She was much worse; she had either the deadly feelings, or else for a time went quite out of her mind and became insensible. At times she had hot flushes, at others trembled and shook all over. Her skin was cool; pulse weak; tongue clean; appetite lost. She could not see to thread a needle. A neighbour informed me that she was a steady well-conducted person, not in the least given to intoxication; but that in her paroxysms she became so excited that she would run out and throw bricks at people.

Feb. 5th. I saw her for the last time before she went to Walton: she was then better, having found much benefit from the liquor arsenicalis, which enabled her to digest her food. She was still "very lost", but had had no more attacks.

March 14th. She has returned about a week from the asylum, where she got better and stronger, but did not get well. She still suffers from sense of pressure at top of head, failing memory, and attacks of depression of spirits. Has had no violent paroxysms. "Can't be active; if she tries to be so, it overcomes her." She sleeps well, and takes her food well, but has sinking sensations at the epigastrium. Feet and ankles very weak; pulse languid; skin cool. She is keeping a good house, and does not appear to be in want.

REMARKS. General debility without apparent cause, cerebral irritation, or prostration, temporary amaurosis, and slight and obscure manifestations of aguish paroxysm,

are the chief features of the foregoing case. To say that it was all hysteria seems to me merely taking refuge in an *asylum ignorantie*. The phenomena bear some resemblance to those of epilepsy, but only a distant. The view which is most satisfactory to my mind is that which regards the whole nervous system, but especially the brain, to have been suffering under the depressing influence of a poison akin to, if not identical with, malaria. If Crimean malarious fever can produce fatuity and insanity (not permanent), is it unreasonable to look for similar though slighter effects from English? The very remarkable and great debility under which this patient suffered, for which no cause could be assigned, is one circumstance which seems almost to require some such hypothesis as that just offered. The cure of such cases as these by drugs alone is scarcely to be expected: rest, a bracing air, and occasional change of scene, with generous diet, are equally or more important.

[To be continued.]

Hospital Gleanings.

DEEPLY BRONZED SKIN, WITH GASTRALGIC SYMPTOMS :
DISEASED SUPRA-RENAL CAPSULES (?).

CASES of deeply bronzed skin, since the recent publication of Dr. ADDISON, attract unusual attention in hospitals; not that the connexion with diseased supra-renal capsules is at all as clearly made out as some writers conceive, but that a great amount of interesting speculation still exists as to the cause of this malady.

J. L., aged seventeen years, a young man now in St. Bartholomew's under the care of Dr. BURROWS, is one of these cases, where the eye at once seizes the distinctive bronzed hue of the skin, as we have seen it at Guy's under Dr. Addison, more especially at the bendings of the neck and limbs. One spot is quite mapped out over the *scrobiculus cordis*, where a blister had been applied before admission into hospital; and here, where the rete mucosum, or perhaps the still deeper layers of the cutis, the corium, or its adipose tissue, have become nearly black, the clinical observer is at no loss to recognise the marks of the disease, the existence of which has been recently suggested by Dr. Addison. The question asked at the bedside is, How does the skin become bronzed? If one of the functions of the spleen be to vitalise the blood, and if the dissolved blood-corpuscles throw again into the circulation certain colouring elements of the bile, we can, in some measure, understand how diseased spleen, or diseased supra-renal capsules to which the spleen is so nearly allied, by also returning, or even delaying, the product of their cell action in a diseased condition of the blood, may darken the skin. Virchow says that we have always diminution of red corpuscles of the blood in enlarged spleen, increase of white corpuscles in leukaemia. Busk and Huxley place the liver in the same category of "vascular glands" as the spleen and supra-renal capsules. The thymus gland is clearly in connexion with the pulmonary organs, as it is absent in fishes; the spleen is in connexion with the portal system and liver; possibly the supra-renal capsules may be in connexion with the systemic capillaries of the kidneys and skin. It is believed, also, that the functions of one or many of these organs may be vicarious of any other: it therefore does not appear too much to fancy that, as jaundice is produced by all the elements of bile remaining in the capillaries from obstruction in the ducts of the liver, this partial bronzing, or partial jaundice, may arise from any or all of these other organs, of which we really know so little, becoming the seat of tubercular or other disease, which must modify or vitiate some of those singular changes in the molecular condition of the blood, otherwise carried on in these organs. In nineteen cases where the supra renal capsules were examined in this disease by Dr. Addison, one case showed suppuration; seven cases atrophy with fibrin-