

You will often learn much by subjecting a deposit, the nature of which is doubtful, to examination in various fluids, such as water, spirit, mucilage, turpentine, Canada balsam, etc.

Of the *Chemical Examination of Urinary Deposits*. In the investigation of those deposits which are prone to assume very various and widely different forms, such as uric acid, it will sometimes be necessary to apply some simple chemical tests, before the nature of the substance under examination can be positively ascertained.

Suppose, for instance, a deposit which is found, upon microscopical examination, not to possess any characteristic form, be suspected to consist of uric acid, or of an alkaline urate, we have only to add a drop of solution of potash, which would dissolve it, and then excess of acetic acid, when the crystals of uric acid will be deposited after some time in their well known rhomboidal form; or any other chemical tests which should be considered necessary may be applied.

When it is requisite to resort to chemical reagents, a drop of the test-solution is to be added to the deposit, which is placed in the cell, or upon the glass-slide. If necessary, heat may be applied to the slip of glass by a spirit-lamp, and, with a little practice, the student will soon be able to perform a qualitative analysis of a few drops of urine, or of a very small portion of a deposit.

*Examination of the Deposit in the Microscope.* The drop of urine with the deposit is to be placed in a thin glass cell, or in one of the animalcule-cages sold by Messrs. Powell and Lealand, of the Euston Road. The latter instrument will be found convenient for examining urinary deposits, as a stratum of fluid of any degree of thickness can be very readily obtained.

Various parts of the specimen are to be brought into the field of the microscope. It is better to examine the object as regularly as possible, commencing on one side, and moving it up and down, until the whole has been traversed. After one specimen has been examined, and the nature of its contents noted, another may be treated in a similar manner. Specimens should be taken from the deposit at different levels, for while some deposits soon sink to the bottom, others are buoyed up, as it were, either by the small quantity of mucus which the urine contains, as is the case with small crystals of oxalate of lime, or by the flocculent nature of the deposit itself.

As each part of the deposit is brought under the field of the microscope, you should endeavour to recognise every object as it passes under view. This, however, will for some time be found a matter of considerable difficulty, arising partly from the great number of deposits which commonly occur together, and partly from the very various forms which many of these substances are liable to assume, but chiefly, I believe, from the great number of substances of accidental presence which are found in almost every specimen of urine subjected to examination; especially in urine obtained from the wards of a hospital, upon which the first microscopical observations are usually made.

[To be continued.]

DISPARITY OF THE SEXES IN VICTORIA. Some remarkable facts respecting the disparity of sexes in this colony are disclosed in the Census of 1857. Sir Henry Barkly, the Governor, in noticing these facts, says in a despatch:—"It now appears that though considerable improvement in this respect took place between 1854 and 1857, yet that the effective disproportion at the latter period was far more serious than would be deducible from the fact of there being 163 males to every 100 females in the entire population. Since tabling the portion of it above the age of 20 years, there were no less than 217 males to that number, the proportions below that age being pretty nearly equal. There were 88,355 unmarried men of 20 years of age and upwards to 12,645 unmarried women of corresponding ages; or, to raise the age of marriage for men to 21, and lower it to 15 for women, there was still an excess of 61,859 bachelors, not to add 5,112 widowers. Even this comparison, however, fails to convey a full sense of the evil as it affects the goldfields, where it appears that the percentage of unmarried men is, to that to be found in the seaport towns, as 61 to 39; or, to state the case in another form, where the bachelors are to the spinsters in the proportion of more than 20 to 1. There are, moreover, 8,096 married men chiefly in the mining districts whose wives are not in the colony. Only 9 per cent. of the women on the goldfields above 20 are unmarried; while in Great Britain the proportion who marry under that age is only 2½ per cent., 30 per cent. of the girls between 15 and 20 are here married."

## Illustrations

OF

# HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

## HULL GENERAL INFIRMARY.

CASES OF TETANUS.

[Reported, with Remarks, by C. J. EVANS, Esq., House-Surgeon.]

CASE I. *Idiopathic Tetanus: Recovery.* (Under the care of O. DALY, M.D.) William Roberts, aged 20, by occupation a groom, was admitted under the care of Dr. Daly, on March 1st, 1860, labouring under symptoms of tetanus. He had suffered for about three weeks from a pretty severe pain under the right breast. Twelve days before admission, he got wet, and remained in that state all day; before which he had been quite well, with the exception of the pain above mentioned. He attended at the Dispensary; and the pain left his chest, and became located in his back and loins; it had since then been gradually extending itself all over him, but was especially severe in the abdomen. A week ago, he found that he could not open his mouth as usual.

On admission, he could just open his mouth sufficiently to protrude his tongue, which was thickly covered with a white fur. His bowels, he said, were moved once daily, but not without castor oil. The abdomen was hard and compressed; the muscles of the neck, legs, and thighs, were rigid, but the extremities less so; those of the arms were natural. Every few moments, a sudden pain attacked him in the back, and passed to the abdomen, making him start. The pulse was 100, of moderate volume; the breath fetid. He was easiest when sitting up in bed and leaning forward. He was ordered to have five grains of Dover's powder every two hours, an ounce and a half of citrate of potash mixture three times a day, and a diet of milk and arrowroot.

March 2nd. He passed a tolerable night. The bowels were not open.

R. Pilul. coloc. comp. ʒj; olei crotonis ℥ij. M. Fiat pilul. xij quarum sumat ij statim et repetat horâ somni.

The powders and mixture were continued, and beef-tea was ordered.

March 3rd. The bowels were well opened after the pills. A linseed-meal poultice was ordered to be applied under the lower jaw.

March 5th. He was in some respects a little better. The tongue was less furred, and the abdomen less rigid. The croton-oil pills were ordered to be repeated, as his bowels were inclined to be costive.

March 10th. The abdomen was much less rigid, and the muscles of the neck also. He could protrude his tongue much further. He had never had, nor had he now, any difficulty in deglutition. Pulse 78. He was ordered to take the powders every four hours.

March 15th. He was gradually improving. The abdomen was becoming quite soft. He continued to take the purgative pills occasionally. He was ordered to have ammonia liniment rubbed into the neck night and morning.

He subsequently had a warm bath several times, and was discharged cured on April 2nd.

CASE II. *Lacerated Wound of Hand, with Fracture: Tetanus on the tenth day, and Death on the fifth day after.* (Under the care of R. M. CRAVEN, Esq.) T. Fenwick, aged 62, married, a very free liver, was admitted under the care of Mr. Craven on Sept. 8th, 1859, having met with an accident to his hand from machinery the previous day, and bringing with him the following account of the injury, kindly sent by Mr. Jackson, surgeon, of Welton, under whose care he first came. "The carpus and metacarpus have been very severely fractured, and the integument has been much torn. The radial artery has been torn through, which I have only been able to secure at the upper end; but little bleeding has taken place from its lower end. . . . I have removed several portions of loose bone, and brought together the integuments of the lower arm and wrist. The tendons, etc., were completely exposed. . . . The thumb and fingers are quite warm to-night, notwithstanding the loss of the radial artery."

On admission, there was no hæmorrhage; and the hand was

comfortable, all the fingers being warm and sensitive. He was ordered to have forty minims of laudanum at bedtime. Water dressing was applied, and beef-tea was ordered.

Sept. 11th. There was some sloughing of the integument on the dorsum of the hand, the tendons becoming exposed. He complained of feeling poorly; he was feverish, with furred tongue. An aperient draught was given; and a saline draught was ordered to be taken every four hours.

Sept. 15th. The water dressing was changed for a linseed poultice. The aperient draught was repeated.

Sept. 17th. To-day (the tenth from the day of the accident), while having his dinner, he complained of not being able to open his mouth so well as usual. There was some stiffness of the jaws. The pupils were a little contracted. He had no pain nor starting of the hand. The tongue was rather furred; the pulse 81, soft. He was ordered to take immediately a powder of eight grains of calomel and a scruple of jalap, and to repeat it in the morning. A turpentine enema was also ordered.

Sept. 18th. He passed a very fair night. The bowels were relieved once only. He could not open his jaws so wide, and refused his beef-tea. Pulse 100.

*Vespere.* The teeth were now almost closed. The pulse was rather small. He was ordered to have forty minims of liquor opii sedativus immediately, and six ounces of wine.

Sept. 19th. The dorsum of the hand looked sloughy. Yeast was ordered to be smeared upon the poultice.

*Vespere.* The jaws were completely closed, and he had great difficulty in deglutition. There was some tension of the abdominal muscles. Pulse 110, feeble. He was ordered to take as much wine as could be got down. The turpentine enema and the anodyne draught at bedtime were repeated.

Sept. 20th. He had a better night, but there was no remission of the symptoms. There had been no action of the bowels, and the difficulty of deglutition had increased. Five grains of calomel were ordered to be placed on the tongue; the sedative draught to be taken every night; and an enema of strong beef-tea and brandy to be administered three times a day.

Sept. 21st. There was some slight tendency to opisthotonos. The sphincter ani was tightly contracted. Pulse 108, small and feeble. At 8 p.m., he had a violent spasm of the respiratory muscles. The pulse became gradually imperceptible, and he died in a convulsion, at 4 a.m.

There was no autopsy.

#### CASES OF CHOREA.

CASE I. *Chorea depending on Pregnancy.* (Under the care of O. DALY, M.D.) Sarah Dalton, aged 18, married, a stout healthy looking woman, of florid complexion, was admitted under the care of Dr. Daly, on March 18th, 1858, suffering from strongly marked symptoms of chorea. She had been married four months, and the affection commenced about a month after marriage, just at the menstrual period. Her health had been previously very good. She had been under treatment throughout, and, a short time before admission, was very violent, requiring several persons to hold her in bed; but since then she became more quiet. She had menstruated once since her marriage, and had some of the symptoms of pregnancy. She was ordered to have two calomel and colocynth pills at bedtime, and a senna draught in the morning; and to have fifteen minims of tincture of sesquichloride of iron in water three times a day.

March 22nd. She was very restless at night; otherwise she had somewhat improved. Two grains of sulphate of zinc and a quarter of a grain of hydrochlorate of morphia were prescribed to be taken in a pill every night, and an ounce and a half of compound decoction of aloes every morning. Full diet was allowed.

March 24th. She slept better, and expressed herself as feeling altogether better. She was ordered to have a shower-bath three times a week, and half a pint of porter daily.

March 29th. There was much improvement in every respect, and the same treatment was ordered to be continued.

April 8th. The patient left the hospital to-day, at her urgent request. The note of this date says: "She has improved most rapidly. On her admission, her gait was most unsteady, and she answered questions shortly and abruptly; now she walks well, and converses without difficulty."

She was admitted again on Sept. 8th, 1859, under the care of Sir H. Cooper, with a return of the choreic symptoms, which, however, were not so strongly marked as on the previous occa-

sion. She had been quite free from them since she left the hospital in April 1858 (seventeen months), till within about five weeks. She had a child a year old, which she only weaned a fortnight before admission. She menstruated regularly during lactation up to the last two months, and she believed herself to be pregnant again. She was ordered to have two calomel and colocynth pills every night at bedtime; and eight grains of tartrate of iron, in camphor mixture, three times a day.

Sept. 17th. She was steadily improving under the above treatment.

Sept. 29th. She was made an out-patient to-day, at her own request; and took, while out, the tincture of sesquichloride of iron; and was discharged cured on November 1st.

REMARKS. The symptoms of this patient yielded speedily to treatment, as on the previous occasion. They were evidently connected with uterine irritation, and seemed to depend upon the condition of early pregnancy.

CASE II. *Chorea.* (Under the care of H. SANDWITH, M.D.) Elizabeth Hutton, aged 13, was admitted under the care of Dr. Sandwith on April 15th, 1858, with symptoms of chorea. It was a first attack, and had commenced about two months before, when her mother first noticed her to have fidgety movements of the hands. She had had no medical treatment. She was ordered to have two grains of calomel at bedtime, and an aperient draught in the morning; and to take eight grains of citrate of iron in mint water three times a day.

April 16th. She was ordered to have a shower-bath every morning.

May 5th. She had improved under the above treatment until the last week or so, during which time there had been a slight relapse; her movements were again fidgety, and her gait unsteady. She was ordered to take ten grains of sesquicarbonate of iron in treacle three times a day, and to continue the shower-baths.

June 8th. Very great improvement in all the symptoms had taken place.

June 12th. A smart attack of erysipelas of the face now showed itself, but subsided rapidly under simple treatment. On its disappearance, the choreic symptoms still remained in abeyance, and the girl was discharged well on July 1st.

CASE III. *Severe Case of Chorea, ending fatally; Autopsy.* (Under the care of O. DALY, M.D.) Anne Beale, aged 15, a well developed girl, but who had never menstruated, was admitted under the care of Dr. Daly on April 8th, 1858, with strongly marked symptoms of chorea. They commenced about three weeks ago, and had been gradually getting worse. She had a severe attack of erysipelas of the face four months since, and previously to that had suffered from low fever. There was no history of rheumatism, and the heart's sounds were natural. The patient herself said that her father had ill treated her, but her mother denied the truth of the statement. Her sister allowed, however, that he beat her once or twice before he discovered that her actions were due to her disease, and not to her own moral conduct. She was in an incessant state of motion, throwing her arms and legs about, and the bedclothes off her. She was ordered to take three grains of calomel and a scruple of compound jalap powder immediately, and to have a fourth of a grain of hydrochlorate of morphia at bedtime.

April 9th. She passed a very restless night, getting no sleep. There was no action of the bowels. Five grains of calomel, and half a drachm of compound jalap powder, were given. Some croton-oil was afterwards placed on the back of the tongue with a feather.

*Vespere.* She was in a great state of excitement, though not so violent as in the morning. The bowels were still unrelieved. She was ordered to have, immediately, a turpentine enema, with an ounce of tincture of assafœtida; and a cold douche.

April 10th. The bowels were relieved once. She dozed at intervals during the night, the rest of the time being very restless. The tongue was very foul. She was ordered four ounces of wine. The enema was repeated, and brought away some scybala.

℞ Potassii bromidi ʒss; tincturæ hyoseyami ʒiij; liquor ammon. acetat. ʒiij; mist. camphoræ ad ʒviij. M. Fiat mistura cujus capiat ʒj tertiâ quaque horâ.

April 11th. Some improvement had taken place; she only woke twice in the night, and was much quieter this morning. The bowels were freely relieved; the tongue was cleaner; and she took her medicine more readily.

April 13th. Her nights were more restless again. Her neck, chest, and back were covered with a rash, apparently the result of the friction by her hands, and her constant movements.

℞ Zinci sulphatis gr. ij; ferri sulphatis gr. i; morphia hydrochloratis gr. ʒ. M. Fiat pilula omni nocte sumenda.

The calomel and jalap powder was repeated.

April 16th. The last two or three days the disease appeared to have made more progress. Her restlessness continued by day; but she slept tolerably at night. The bowels acted about twice daily. The expression of countenance was dejected; the eyes were sunken, with dark areola; and she had lost her plumpness. There was a tendency to sordes about the mouth; and the pulse was feeble. Her fingers were frequently clenched in upon the palms of her hands. As much wine was directed to be given as could be got down. She was ordered to have, twice a day, a pill containing three grains of blue pill and two grains of extract of conium.

April 20th. She was much weaker; she kept moaning when awake, but lay quiet, simply from exhaustion. A low congestive pneumonia had set in; the pupils were dilated; the lips covered with sordes.

℞ Ammonia sesquicarbon. ʒij; aetheris chlorici ʒj; infusi senegæ Oss. M. Fiat mistura cujus capiat ʒj 3tiis horis.

Turpentine stupes were ordered to be applied to the chest, both before and behind. She gradually sank, and died at two o'clock the next morning.

AUTOPSY, twelve hours after death. *Head.* The dura mater was strongly adherent to the calvarium, along the course of the sagittal suture, also to the brain beneath, along the mesial line. Here, also, there were small patches of whitish matter, looking like a deposit of lymph, but which, when examined by the microscope, appeared to be of a tuberculous nature. The puncta vasculosa were numerous; very little fluid was found in the ventricles. The rest of the brain appeared healthy.

*Chest.* Both lungs very much congested, and adherent to the walls of the chest posteriorly, so that, on removing them, some small portions were torn off. Bloody serum exuded copiously on pressure. The heart was healthy, with the exception of two small warty vegetations on the edge of one of the cusps of the mitral valve, which were easily separated. The uterus was natural; the ovaries were large and vascular. The spine was not examined.

CASE IV. *Severe Case of Chorea, ending fatally.* (Under the care of H. Sandwith, M.D.) Joseph Longman, aged 19, was admitted on February 21st, 1859, with symptoms of chorea of a very severe nature. He had been rather badly off lately. The violent symptoms had been present three or four days; but he was first noticed to have unsteady, fidgety movements about three weeks before admission. He was ordered to have four grains of calomel immediately, to be followed by an ounce of castor-oil. Towards evening, he became so violent that it required the assistance of two men to keep him in bed. He frequently made use of the name of "Jesus", "Heaven", and such like expressions. It appeared that he was a regular attendant at a dissenting chapel. He was ordered to have an enema containing turpentine and castor-oil, and to take, every three or four hours, one eighth of a mixture containing two drachms and a half of tincture of sesquichloride of iron, and two drachms of solution of hydrochlorate of morphia. He was made to inhale the vapour of chloroform, at intervals, which quieted the spasmodic movements, and procured him some sleep.

Feb. 22nd. He passed a restless night. The same treatment was continued through the day, with the effect of keeping him much quieter, he being somewhat under the influence of the morphia. A copious dark stool was passed, after the injection.

*Vespere.* He was ordered to have ten grains of calomel immediately; and to take, every four hours, three tablespoonfuls of an eight-ounce mixture, containing ten drachms of spirits of turpentine and an ounce and a half of castor-oil, in peppermint water. The purgative enema was repeated. The morphia, steel, and inhalation of chloroform were ordered to be omitted. He was also ordered to have a mild tepid shower-bath in the morning.

Feb. 23rd. He slept occasionally, for ten minutes or so together, at intervals during the night, but the rest of the time he was very violent. There was the greatest difficulty in getting his medicine down, and he asked to have more of the "scent". The conjunctivæ were congested, and he said, when asked, that he had pain in the head. Pulse 100. Three leeches were applied to each temple; and he was ordered to have a compound senna draught immediately, and a turpentine

enema in the evening. The shower-bath was ordered to be repeated in the morning.

Feb. 24th. The inhalation of chloroform was resumed at intervals during the night; when not under its influence, he was very violent, and was so much so this morning that it was necessary to put a strait-waistcoat on him, to prevent him from injuring himself. He was ordered to have half a drachm of carbonate of iron in treacle, three times a day. The bowels were open well during the day. He continued violent till the afternoon, when he became worse rather suddenly, and died at nine in the evening.

A *post mortem* examination could not be obtained.

It was afterwards reported that he had received a wound of the hand a week or so before admission, though it could not satisfactorily be made out. He never complained of it, nor was it mentioned at all by himself or his friends while he was in the infirmary. The date of the commencement of the symptoms, and of the receipt of the supposed injury, were not consistent, and the former did not partake of the characters of tetanus.

## Original Communications.

### THE ALCOHOLIC TREATMENT IN EXHAUSTING DISEASES.

By JOHN PURSELL, M.D., Brighton.

In a former communication, I endeavoured to prove the utility and efficacy of administering cordials (that is, diluted alcohol) in extreme cases of exhausting diseases, where usually the inflammatory action or congestion had been of the passive or asthenic character, and had attacked some vital organ, and terminates by inducing complete prostration of the physical and vital energies of the patient.

I propose to consider now the auxiliary agency of cordials, in conjunction with appropriate medical treatment, in subacute and chronic disease; maintaining that from the artificial habits of society, recovery, in the cases I am about to detail, would be, if not actually impossible, at least very improbable, independently of such agency.

CASE I. A. B., a commercial traveller, aged 27, was placed under my medical care about fifteen years since. He was the subject of general dropsy of some months duration, for which he had submitted to treatment for three months at the west end of London, being attended by a hospital physician and a general practitioner, without having derived any or the least amelioration of his symptoms during this period. He stated that, previously to this attack, he had enjoyed a fair state of health. Happening to be exposed to cold and heavy rain, he got very wet, and hence his present attack. He had taken a great deal of diuretic and laxative medicines; but remained in *statu quo*. Change of air was suggested; and he was located in the neighbourhood in which I was then practising. On my visiting him, I found that he had œdema of the lower extremities; the heart's action was normal, with occasional intermissions. The urine was found to be albuminous on the addition of nitric acid.

I commenced by ordering this patient one grain and a half of hydrargyrum cum cretâ every four hours, with one grain of opium and two ounces of brandy diluted with twice its quantity of water, every four or five hours; strong beef-tea as diet, and effervescing medicine every six hours; and occasional vesication on the spine. On the eighth day, slight ptialism occurred; he was then put on a diet of mutton chops, with one pint of porter or ale, twice a day, and half a pint of wine, the brandy being suspended. In twelve days, convalescence was established; and within a month from the commencement of my attendance, he was enabled to resume his accustomed duties.

It is important to bear in mind, that this patient, from his habits as a commercial traveller, took daily two or three pints of malt liquor, besides a pint of wine, with a generous diet of meat, etc., three times a day. It would have been unreasonable to expect the resources of nature or her restorative processes to be called into healthy action by the exercise of routine and the withdrawal of his usual beverages, without considering the previous habits of the patient, and the constant