get a cure in such cases, though sometimes the cautery has to be applied more than once.

A patient comes to you, and says that he is very uncomfortable because he has a little swelling which is very painful. You will find a little bluish mass by the side of the anus, and as far as I have seen it is more common in men than in women. It is nothing more nor less than a thrombus in one of the inferior hæmorrhoidal veins. You find, perhaps, that the patient has been dining out once or twice of late, and his bowels have become a little constipated and the liver overloaded, and the venous circulation obstructed. Every now and then patients will go on suffering this inconvenience for a few days without taking advice, and the thing gets well; that is, it gets well by absorption of the blood clot, and by leaving a loose fold of skin at the verge of the anus. That is how those loose external piles which we see so commonly are formed. But if you get the case in an early stage, by far the best thing to do is to make a little nick with a bistoury into the swelling, and to turn the clot out. It turns out very readily; you get rid of the thrombus, and you see the lining wall of the vein left behind; you put a little iodoform to it, and the thing heals up in a day or two, so that the patient has no further trouble.

One word with regard to ischio-rectal abscesses. The patient may have an abscess in the ischio-rectal fossa from various causes. It may be from internal causes such as ulceration, which is often tuberculous, or a fish bone or a pin may have passed through the bowel and then become entangled in the sphincter, producing perforation; or it may arise from external causes, such as sitting on damp grass, on the wet seat of an omnibus, or things of that kind which have a tendency to produce local irritation and inflammation about the buttocks. From whatever cause it may happen the symptoms are much the same. The patient has a phlegmonous swelling, which is hot and tender, between the ischium and the anus, and the ischio-rectal fossa is filled up with inflammatory deposit, which rapidly becomes purulent. In a case of that kind the sooner you make an opening and let the matter out the better, for if it is allowed to remain it will burrow up into the rectum. The best way is to put the patient on his hands and knees, then to pass the finger into the rectum, left or right, according to circumstances; you then introduce a bistoury by the side of the rectum and cut outwards. You have the patient completely under your control by the finger in the rectum, so that you can hold him firmly, and you can put the knife down by the side of the rectum, and just cut sufficiently to let the matter out freely. Then comes the question, Shall you do more? Shall you lay the abscess open into the rectum? That will depend upon how thin the rectum is. If the abscess has already encroached upon the rectum so that it is thin, it is better to lay it open at once into the rectum, because if you leave it it will degenerate into a fistula, and you will be doing one operation instead of two.

You will know at once by the smell whether or not the abscess communicates with the rectum. Nothing is more offensive than the smell of pus in an ischio-rectal abscess which communicates with the rectum. In these cases there is no doubt about laying the bowel open; but in other cases, where it is a superficial abscess due to external causes, there will probably be no smell, and then I advise you not to lay the rectum open unless you have reason to think that it has been encroached upon.

Lastly, one word about hæmorrhage from the bowel. A patient comes to you and says: "I lose a little blood from the bowel, but I do not think it does any harm." That is perfectly true; an occasional slight discharge from the bowel is in many cases a salutary thing. You remember how the rectum is supplied with blood from the inferior mesenteric as well as from the iliac and pudic arteries, and that all the arteries inosculate, while the veins communicate with the vena portæ as well as the pudic veins, so that a slight hæmorrhage may in that way relieve a congested liver. But it is different if the patient loses considerable quantities of blood from the rectum; and you should always be on your guard to inquire whether the blood is simply mixed with the motion or whether it is spurted out over the pan of the closet, because in the latter case it is obvious that it must be arterial blood or venous blood in considerable quantities shot out by

the muscular efforts of the rectum. In either case the patient may lose more blood than is good for him. It may depend upon internal piles, and in the majority of cases it is so; but of the treatment of these I am not going to speak to-day.

There is one thing which causes hæmorrhage, and that is a vascular patch of mucous membrane in the rectum. When you expose it with the speculum you see blood pouring out from it. Those cases can be treated very readily by the application of caustic. They are the only cases of piles or rectal disease which really do well with caustic. To apply nitric acid to great masses of internal piles is really to play with them, and not to cure them. But if on passing the speculum you can distinctly see a vascular surface, which bleeds very readily, I advise you to touch it freely with a piece of stick dipped in the strongest fuming nitric acid, or, as I prefer, the acid nitrate of mercury, the effect of which will be that you will arrest the hæmorrhage immediately. You should then lock up the bowels with a little opium for a day or two to give rest, and the next time the patient has an evacuation there will be no bleeding, or, at least, much less; possibly another application may be required.

I will take another opportunity of speaking of hæmorrhoids, fistula, and so on. To-day I have merely gone through these minor matters, which, after all, are very important, both to the patient and the practitioner.

REMARKS

ON A CASE OF

PHOSPHORUS POISONING

WITH SPECIAL REFERENCE TO THE

MENTAL SYMPTOMS DURING LIFE

AND TO THE

PATHOLOGICAL APPEARANCES IN THE BRAIN CORTEX AFTER DEATH.

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AND

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CLINICAL REPORT BY DR. ELKINS.

THE patient, a lady, aged 34, suffered from mental depression, but otherwise was intelligent and coherent in conversation and had a good memory. She had been a voluntary patient in the asylum since December 18th, 1889, and therefore had many liberties which a certified patient would not have been allowed.

At 1.15 P.M. on February 4th, 1891, she informed the matron that she had on the previous evening sucked and chewed the phosphorous ends of two boxes of common red-headed matches. She was out driving in town on the afternoon of February 3rd, as usual, accompanied by another lady patient, and an experienced and trusted attendant. Having requested permission to enter a fruiterer's shop in order to buy some fruit, she then, on her own statement, obtained instead for the sum of one penny, three boxes, each containing about eighty matches. That same afternoon and evening, after her return to the asylum, she sucked and chewed the phosphorous contents of two of the boxes. The third box, which bore the words "Cleopatra Needle Matches, Bryant and May," she handed to the matron when telling her story. She said the taste of the phosphorous was very disagreeable. It was ascertained that, during the night, she had vomited a little, but unfortunately the vomited matter was not kept, and apparently did not attract attention by either its luminosity or its odour. Next morning she seemed slightly out of sorts, and nothing serious being suspected, she was given a dose of castor oil by her nurse. She ate a fair breakfast. At the medical visit it was noticed that she was not quite well, but she explained that she had been constipated and had had a dose of castor oil. When seen after her statement to the matron she said she had a slight "indigestion feeling," a disagreeable taste in the mouth, some nausea and a very slight general feeling of malaise. She showed a disinclination for food, the temperature was 98.8° F., and the pulse, which was fairly normal in character, was 90 per minute. There was no tenderness on pressure of the abdomen and no phosphoric odour of the breath. Later in the day her bowels acted, and after taking a seidlitz powder she vomited a little bilious mucus, but neither then nor at any time during her short illness was there observed in either the motion or the vomit any luminosity in the dark, any smell of phosphorous, or any sign of the red heads of the matches. In the evening the temperature was 98.5° F., the pulse was 100, and the symptoms remained much the same as in the afternoon. On the morning of February 5th, the nurse stated that the patient had slept well during the night, but had appeared a little restless at times as if dream-

ing. The morning temperature was 99° F., and the pulse was 100. There seemed no increase in the epigastric discomfort. The nausea and taste of "rotten eggs" and "rotten greens" had however increased, and when the patient was given a seidlitz powder it produced vomiting of some bile-stained mucus. The evening temperature was 99° F., and the pulse was 96. She still had the feeling of nausea, although there was no actual vomiting. On the morning of February 6th, it was reported that the patient had slept fairly well; but, as during the previous night, she had appeared restless in her sleep. A very slight icteric tinge of the conjunctivæ was now for the first time noticed. The temperature at 8 A.M. was 100° F., and the pulse was 100 and regular, but more compressible. On awakening, the patient had vomited some clear mucus, slightly tinged with bile. The nausea was still a very marked symptom, and there was a disinclination for any breakfast. At 1 P.M. the temperature had risen to 101° F. There was slight pain on pressure over the region of the liver, and the hepatic dullness was increased a little downwards. The patient now complained of "rheumatic pains" in various situations, but chiefly around the shoulders and in the lumbar region. At 6 P.M. her temperature was 101.8° F. Up to this time none of her urine had been obtained, because she had passed it when at stool. Now, however, eight ounces of reddish-yellow urine, with a large deposit of urates was voided. Its specific gravity was 1030; it had a markedly acid reaction; the odour was normal, and it contained a mere trace of albumen and bile. The patient was menstruating, it being her usual period. At 10 P.M. the temperature was 101.6°; and the pulse was 120, regular, but easily compressible. The pain over the region of the liver was still slight, and did not trouble the patient much. She was still inclined to vomit, especially if she rose from the recumbent position. On February 7th the night nurse reported that the patient had slept hardly at all, only dozing for a few minutes at a time. At 2 A.M. the temperature was 100.6°, and at 6 A.M. and 10 A.M. 101.6°. The pulse was 120, small, and very compressible, but still regular. There was distinct jaundice of the conjunctivæ, and a slight general icteric tinge of the skin. About twenty ounces of acid, reddish-brown turbid urine was passed. The urinary deposit was considerable, being chiefly of mucus and urates, but under the microscope a few fatty casts and some fatty *débris* were discovered. On testing, a small quantity of albumen and bile was found, but no sugar. The patient was still menstruating. At noon her temperature was 102.1° F. She felt generally weaker, and expressed it by saying she felt "very tired." The epigastric discomfort increased to actual pain. The liver was easily felt under the ribs, and was painful on pressure. At 2 P.M. the temperature was 102.6°, and the pulse 120, very compressible, and weaker and smaller than in the morning. Up to this time the respiration had been quite normal, but now occasionally the patient sighed deeply or yawned as if very weary. She complained of slight palpitation, and on examination the cardiac sounds were found to be distant and indistinct. She said she felt tired and sleepy. The "rheumatic pains" became more marked and general, but still were worst at the shoulders and in the lumbar region. The hepatic pain also increased, coming in spasms and being made worse by any movement of the patient. At 4 P.M. the patient suddenly became much worse. There was decided cardiac failure, the pulse being thready, irregular in time and volume, and at one time, for a minute or two, imperceptible at the wrists. A dusky lividity appeared over the face, especially noticeable in the mucous membrane of the nose, and around some acne spots on the cheeks. The respirations were 36 per minute, some of them being very deep and some very shallow—in fact, approaching the Cheyne-Stokes type. There was a great tendency to retch and vomit. Under treatment the cardiac condition began to improve somewhat, but a new symptom—intense thirst—now manifested itself. The patient could not get enough to drink, and continually asked for more. She became more drowsy, and then again more restless; it began to be difficult to make her understand what she was required to do, and it was necessary to speak loudly and repeat the words several times before she responded. Up to this time she had been reasonable, coherent, and intelligible in conversation, helped to carry out any instructions that were given regarding her treatment, and altogether behaved in a very sane way; but now the intellectual faculties became decidedly clouded—she was very confused, did not answer questions either readily or correctly, and seemed only half conscious of her state, and of what was going on around her. After her thirst was satisfied for a short time, she would lie back on the pillow, close her eyes, and talk in a semi-delirious manner, the word "yellow" being frequently repeated. Her speech got thick and like that of a drunken person, and her pupils became dilated and fixed. Sometimes she would be conscious for a minute or two, and recognise those about her, but by 6 P.M., when the temperature had sunk to normal, she seemed quite unconscious and apparently blind. Her breathing was sometimes very rapid and shallow, at other times deep and laboured; there was frequent yawning, and once the respiration stopped for about half a minute. She could take nothing by mouth, and the cardiac condition was again critical. A drachm of ether given subcutaneously produced no response from the heart. At 8 P.M. the temperature was 97°, and although hot bottles and additional clothes were used, the extremities were cold and livid. The peculiar breathing continued. For about two hours before death there were attacks of great restlessness, the patient throwing herself about the bed, and requiring three persons to restrain her wild movements and prevent her injuring herself. The strength of the patient, considering the condition of the heart, was marvellous. During some of these attacks of restlessness the patient's expression was one of pain, but more often it was of a most intensely maniacal character. The eyes were wide open and staring, the eyebrows elevated, the pupils fully dilated, the mouth set, and the teeth clenched. The patient was also jaundiced and livid. Just before death there was external strabismus of the left eye. Death occurred at 11.15 P.M. on February 7th, or about 100 hours after taking the poison.

In this lady the menstrual period seems to have aggravated, as it so often does, the mental condition, producing an increase of the mental depression, and even making the patient wishful for death.

The treatment adopted—which for the sake of brevity is omitted from this report—was unsuccessful, mainly for two

reasons. By the time the poisoning had been discovered any phosphorus that had not been vomited had in all likelihood passed through the stomach, and the castor oil which had been given in the morning probably dissolved the phosphorus and helped the absorption of the poison.

Briefly stated, the symptoms and the physical signs were, in the order of their appearance:

Alimentary System.

Nausea; retching; vomiting; "indigestion feeling;" disagreeable taste of "rotten eggs" and "rotten greens;" discomfort, then pain, and latterly spasmodic pain in the hepatic region; increased hepatic dullness; jaundice; intense thirst.

Circulatory System.

Increase of pulse rate; compressibility, and latterly irregularity and threadiness of pulse; palpitations; cardiac sounds indistinct and distant; cardiac failure and temporary stoppage of radial pulse; faintness; lividity; coldness of extremities.

Respiratory System.

Yawning; irregular respiration approaching the Cheyne-Stokes type.

Urinary System.

Urine scanty, high coloured, of high specific gravity, with traces of albumen and bile, and having a deposit of urates, mucus, fatty casts, and *débris*. (It must be remembered, however, that the patient was menstruating.)

Nervous System.

Mental symptoms: Listlessness; drowsiness; restlessness; mental confusion; inability to understand what was said; inability to answer questions readily or correctly; inability to recognise friends; semi-consciousness; semi-delirium; delirium; fits of great restlessness and violence; constant use of the word "yellow" when delirious; maniacal expression and behaviour; unconsciousness; coma.

Sensory symptoms: "Rheumatic pains;" blindness(?).

Motor symptoms: Thick and drunkenlike speech; pupils fixed and dilated; external strabismus of left eye.

Temperature Chart.

It is worthy of note that two prominent symptoms of phosphorus poisoning, namely, the peculiar odour of the breath and the luminosity of the vomited matter, were in this case absent. For the sum of two-thirds of a penny this poor

lady accomplished her end. It is difficult for the public to obtain most poisons, yet phosphorus—a deadly poison—can be bought in the form of matches by anybody for a mere

trifle. Surely the sale of poisonous matches should be prohibited, especially when non-poisonous ones are so cheap.

PATHOLOGICAL REPORT BY DR. MIDDLEMASS.

The pathological appearances presented by the various organs in the above case, both to the naked eye and under the microscope, were very characteristic. Naturally, the morbid changes in the brain were those to which most attention was paid, seeing that the nervous symptoms were so prominent and interesting. The existence of previous mental disease, of course, makes it more difficult to decide what the exact changes produced by the poison were. Unfortunately, we are not yet in a position to say exactly what morbid appearances accompany every form of mental disease; and that from which the patient suffered (slight melancholia) is not one to which a distinct pathology can be attached. Nevertheless, it seems possible to differentiate the changes due to the phosphorus from those already existent, and causing the mental disease.

In addition to the brain, most of the important organs were made the subject of examination, and the results are given.

The skin and conjunctiva had a decidedly icteric tinge. In the various cavities of the abdomen, pleura, and pericardium there was a small quantity of slightly blood-stained fluid. In the cavities of the dura and arachnoid there was about $\frac{1}{2}$ ounce of clear fluid. On reflecting the dura mater there was discovered a recent hæmorrhage from one of the pial vessels on the left side. It was quite thin, forming a layer of less than an eighth of an inch in thickness, and quite recent, situated towards the vertex, and extending from the top of the fissure of Rolando backwards nearly to the parieto-occipital fissure, and downwards to about an inch above the fissure of Sylvius. It was slightly adherent to the dura, and the greater part was lifted off along with the latter when it was reflected. It did not pass down the falx at all. There was another similar, but much smaller, hæmorrhage about the size of a shilling over the middle of the occipital region. The sinuses of the dura mater contained large well formed *post-mortem* clots.

The encephalon weighed 53½ ounces, and the convolutions were numerous and well formed. The pial veins were very considerably engorged. The pia was not at all adherent to the cortex, and was separated from it by fluid to a noticeable extent only over the right superior parietal convolution, where there was some degree of local atrophy. There was no apparent atrophy of the convolutions at any other part. On section of the brain, the grey matter was seen to possess a distinct rose pink colour, and appeared very congested, many of the individual vessels being quite distinct to the naked eye. Its consistence was firm and it was not apparently atrophied. The white matter seemed fairly healthy, except that the puncta cruenta were more than usually prominent. The lateral ventricles were not dilated and the ependyma was healthy, there being an absence of thickening and of granulations. Like the grey matter of the cortex, the basal ganglia were of a rosy pink colour and congested appearance, the vessels being prominent. In the cerebellum, pons, and medulla there was a similar condition of things.

It was in the microscopic appearance of fresh sections of the cortex that the most interesting changes were seen. Those stained with osmic acid and picrocarmine showed very distinctly the presence of fatty particles in the walls of the larger capillaries. In only one or two instances was this change seen in the smallest capillary loops which pass to the individual nerve cells. In the larger nerve cells there could also be made out many darkly-stained fatty granules, and in some cases these were so numerous that the cell appeared like a black granular mass embedded in the neuroglia, without any definite structure. Where the fatty change had not been so pronounced the nucleus was well seen, and in nearly all of these several small, round, black points were visible, showing that the fatty change had taken place in the nucleus as well as the cell protoplasm. These appearances were corroborated in sections stained with aniline blue-black. In these the fatty particles in the nuclei appeared light, in contrast with the remaining darkly stained portions, and in the cell protoplasm the evidence of fatty degeneration could also be made out, though not so easily, as the fatty granules, slightly tinged by the osmic acid used in fixing the sections, presented an appearance not differing greatly from the par-

ticles of pigment in the cell. The changes in the nerve cells were most pronounced in those of the fourth layer.

This fatty change in the walls of the small vessels and in the nerve cells was almost certainly produced by the phosphorus which had been taken, as the extent to which it had occurred was quite exceptional, no other case that I have examined showing to the same marked degree. It is, moreover, quite in accordance with what one would expect, after examining the changes produced by it in the liver and other organs. The power of phosphorus to produce fatty degeneration in nerve-cells has lately been denied,¹ but this case seems conclusively to show that the nervous system does not escape the action which we know is capable of being produced by that poison in other organs. There were also evidences of slight pigmentary degeneration of the nerve cells, and deposit of pigment in the perivascular spaces, as well as slight increase in the nuclei of the neuroglia. From what we know, however, it is more than probable that these changes were present before the phosphorus was taken, and were the pathological correlatives of the mental disease from which the patient suffered.

The right lung showed numerous small subpleural petechial hæmorrhages between the middle and lower lobes, while on the left these were absent. The lung tissue was slightly congested and the bronchi inflamed, otherwise they appeared normal. On the heart there were a few subepicardial hæmorrhages at the apex of the left ventricle posteriorly, and also at the junction of the auricles and ventricles. There were well-formed large *post-mortem* clots in all the cavities. The aortic valve was slightly thickened and incompetent. The muscle was pale and soft, and had a greasy feeling. Under the microscope very well-marked fatty degeneration of the muscular fibres was seen to have occurred.

The liver weighed 52 ounces, and was of a very pale canary yellow colour, mottled with petechiæ on the surface. On section there were also numerous small hæmorrhages scattered all through the liver tissue. Under the microscope these hæmorrhages were found to be situated chiefly in the portal spaces and amongst the neighbouring liver cells. The liver cells were almost entirely replaced by fatty matter, and the nuclei could be made out only with difficulty, in many cells not at all. A section treated with ether showed very little of the cell protoplasm left. There was a considerable increase in the connective tissue corpuscles in the portal spaces, evidencing an inflammatory condition.

The kidneys were slightly enlarged, and appeared pale in colour. The vessels were somewhat congested, and the tubules evidently fatty. Under the microscope this was seen to be the case, all the cells containing small fatty granules.

The spleen weighed 3 ounces, and was softish, and of a uniformly dark colour on section. No definite changes beyond some congestion could be made out.

The stomach contained 16 ounces of dark brown fluid, which had no special odour. The mucous membrane was very pale, and at the cardiac end there were a few submucous hæmorrhages. The cells of the peptic glands were fatty, and there were evidences of an acute inflammatory process with rupture of some of the smaller blood vessels and escape of the corpuscles. There were numerous subperitoneal petechiæ scattered over the mesentery with fatty degeneration of the cells in the walls of the vessels.

The pathological interest of this case lies in the changes in the nerve cells of the cortex which have been described. The production of fatty degeneration in them shows that the tissues of the nervous system are not exempt from the powerful action in this direction which phosphorus possesses. The occurrence of the change in so many organs and tissues of the body would point to some fundamental alteration in the processes of metabolism which phosphorus has the power of bringing about. What this really consists in, however, we can as yet only conjecture.

REMARKS ON THE DIAGNOSIS AND TREATMENT OF THE INFECTIVE FORMS OF ECZEMA.²

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I ACCEPT almost without reservation the definition of eczema adopted by Dr. Unna, which is that "eczema is a chronic parasitic catarrh of the skin, with desquamation, itching, and a tendency to respond to irritation by exudation and well-marked inflammation." In the present state of our knowledge it is impossible to divide eczema into varieties with anything like scientific precision; but, thanks to Dr. Unna, we seem at last to have made a commencement in that direction.

Eczema Seborrhæicum.—Under this title a number of diseased conditions which were formerly variously named and

¹ Trzebinski: *Arch. f. path. Anat. u. Phys. u. f. klin. Med.*, Bd. cvii, H. 1.

² Read at a meeting of the Shropshire and Mid-Wales Branch.