

and 1.5 per cent. of urea. It deposited a thick grumous sediment, consisting of amorphous pigment, pigment casts, urates, and some octohedral crystals of oxalate of lime. No blood-corpuscles were present.

On one occasion I examined the patient's blood microscopically, just after he had voided black water. It presented no unusual characters. On several occasions there have been well-marked papules and wheals of urticaria present at the time of the patient's visit.

The case I have narrated is a very characteristic example of a rare but well-recognised disease. The phenomena in such cases are so striking that they have engaged the attention of many of our best clinical observers and chemists. It would be out of place in a communication like the present to refer to the writings of the numerous authors who have studied the disease and enriched our knowledge concerning it, and I propose, in stating my views as briefly as possible, to allude only to a few which have special bearing on the points I touch upon.

In the first place it is certain that the matter which colours the urine and renders it of a tint of from London porter to a deep red is the colouring matter of the blood, the proteid hæmoglobin. This has been shown also by Lebert,¹ Van Rossem,² Lichtheim,³ Robert and Küssner,⁴ Winternitz,⁵ indeed, by all who have examined the blood spectroscopically. As is well known, hæmoglobin gives two characteristic absorption bands (A and B) between Fraunhofer's lines D and E. So-called met-hæmoglobin (reduced hæmoglobin) gives a single broad band between D and E, occupying the space between the absorption bands (A and B) of hæmoglobin. Met-hæmoglobin has been found by other observers besides Dr. Tidy in similar cases.⁶ Hæmatin as a constituent (and the constituent which contains the colouring matter) of hæmoglobin, is present, but not in the free state. The almost invariable absence of blood-corpuscles from the urine in such cases shows that the latter do not pass through the walls of the vessels of the kidney, unless, as asserted by Van Rossem, the blood is acted upon chemically in the bladder after leaving the kidney. There is always albumen present in the urine, invariably at least proportionate to the amount of blood-colouring matter, and often largely in excess of that proportion. All the ordinary constituents of the urine are present, and in nearly their natural proportions.⁷ Urea may be slightly deficient during the paroxysm, but the total urea-elimination, and notably the inter-paroxysmal elimination, is natural.

It appears, then, that we have the blood-colouring matter making its appearance in the urine without the blood appearing as blood, and it follows that blood solution or disintegration (hæmolysis) must take place in some part of the organism. If this blood solution were general we should have the dissolved hæmoglobin circulating throughout the body and staining the tissues of all parts. Now it is true that a certain degree of staining or pigmentation of the skin and conjunctivæ is seen in nearly all cases of hæmoglobinuria, somewhat resembling that seen in malarial cachexia, but not exactly identical with it. In the case recorded by Robert and Küssner⁸ it is reported, "the skin is of a remarkably brownish-yellow colour, which is even shared by the sclerotics." In nearly all the recorded cases, however, the colour has been of a very faint yellow tint, and so slight as to preclude the idea of the blood solution being general. A certain amount of dissolved hæmoglobin does, I believe, circulate throughout the body, imparting the faint yellow tint to the tissues. Its source I shall presently try to trace. From the blood-colouring matter making its appearance in the urine, it follows that if it is not general to the vascular system, it must be confined to the genito-urinary apparatus; and since the kidney is the organ where the urine is separated from the blood, in the highest degree of probability the seat of blood solution is the kidney, for in no part of the genito-urinary tract below the

kidney does any wholesale depuration of the blood take place.

Of course, if the blood destruction took place in any other organ except the kidney, the dissolved hæmoglobin would have access to the general circulation. There is evidence that, in the disturbance of the circulation accompanying the voiding of the black water, other organs are affected, as the spleen, which has been observed to enlarge. But the blood disintegration cannot take place here, or the dissolved hæmoglobin would have to enter the general circulation before it could be eliminated by the kidney.

(To be concluded.)

CASE OF LARGE PAROTID TUMOUR.

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MRS. M'D—, aged fifty-four, was admitted on the 18th of February, 1879, to Ward 14 of the Western Infirmary, Glasgow. Twenty-six years ago the patient noticed a small tumour behind the lobe of the left ear; this gave rise to no pain, and grew very slowly at first. For a period of about twenty years little attention was paid to it, but within the last six or seven years increased rapidity of growth had been marked. In the last five years she states that the growth had doubled its size. From first to last it had never given her any pain, the only inconvenience being caused by its bulk and weight. The patient has always been a healthy woman, and remains so. Her appetite is good; her pulse slow, steady, and full; and she is strong-looking and well nourished.

On admission the patient had a large, irregular, nodulated tumour situated on the left cheek. When the neck was kept straight, the lower edge of the tumour rested on the infra-clavicular space, and the outer edge extended to a point in line with the axillary line on the left side. Its shape was irregularly spherical (several rounded knob-like projections tended to destroy the globular form), and the part of attachment was slightly pedunculated. The skin over the surface was smooth and shining, and some large veins were seen coursing over the anterior surface of the mass. At its back part, and around the base of the tumour generally, it felt firm and elastic; while the peripheral portion, more especially a nodule here and there, seemed soft and almost fluctuant. The base of the tumour extended from an inch and a half behind and below the ear to the angle of the mouth, and from the zygomatic arch to within an inch of the clavicle. The mass was freely movable on the subjacent parts; it could easily be shifted from side to side, and also in a vertical direction. No pressure effects were observable; there was no protrusion into the mouth; and the skin over the tumour was not affected, save by stretching. The following were the more important measurements: circumference of pedicle, 21 in.; greatest circumference of tumour, 24 in.; from angle of mouth to lower part of lobe of ear, 15½ in.; from middle of zygomatic arch to supraclavicular attachment, 16 in.

Operation, Feb. 26th.—A semilunar incision, commencing at the lobe of the ear, was carried above the posterior surface of the tumour, to near the clavicle, and the cellular tissue scratched through until the capsule was reached along its whole length; then the knife was laid aside, and the finger-points insinuated close to the tumour, and rapidly passed upwards and downwards, separating the very loose adhesions. The fingers were carried towards the anterior aspect, the tumour being carried forwards; it was then thrown backwards, and an incision made in front, corresponding to that on the posterior surface, when the mass was easily lifted out. Only three small vessels required ligature, and, considering the size of the tumour, an exceedingly small quantity of blood was lost. The flaps were stitched together, a drainage-tube inserted, and the wound dressed antiseptically. The mass weighed 6 lb. 11 oz., and the time occupied in its removal was five minutes and a half.

A section being made through the thickest part of the tumour, it discloses two circular surfaces, each seven inches in diameter. The knob-like projections seen on the surface of the tumour tend to destroy the circular outline of the

¹ Berlin. Klinische Woch., May 13th, 1872. Abstract by Dr. Druitt, Med. Times and Gaz., May 10th, 1873, p. 490.

² Dissert., Amsterdam, 1877.

³ Volkmann's Sammlung, No. 134. Abstracted in Centralblatt, 1878, s. 483, p. 675.

⁴ Berl. Klin. Woch., Oct. 28th. Abstract in London Med. Record, 1878, p. 511.

⁵ Die Hydrotherapie auf Physiologischer u. Klin. Grundlage. Wien, 1877.

⁶ Anleitung zur Harn Analyse, von Dr. W. F. Loebisch. Wien, 1878.

⁷ Two Cases of Intermittent Hæmatinuria, by Robert Druitt, M.R.C.P., Med. Times and Gaz., 1873, pp. 408, 461, and 489.

⁸ Op. cit.

section. The cut surface divides itself readily into two parts—an outer or cortical portion, of a firm consistence, and of a greyish-white colour; and an inner or medullary portion, soft and pulpy. The thickness of the outer part varies from half an inch to two and a half inches, and the diameter of the soft internal portion is about three inches. The entire surface remained flat for a considerable time after the section was made, but, owing to the escape of a colloid-looking material from the medullary portion especially, the internal part became concave, while the rind became flat. In appearance, the central part is very peculiar. Near the very centre a crescentic or sickle-shaped part is observed, two inches and a half at its greatest length, and three-quarters of an inch at its greatest width. This is of a bright-red tint, exactly like arterial blood. It had this colour immediately on section, and retained it, without any appreciable heightening, after exposure to the air. The consistence of this part resembled that of a very firm blood-clot. Surrounding the bright part, and separating it from the outer firm portion, there is a zone of very varying width, very soft, and of a darker grey colour than the cortical portion. This part has the look of degenerated material, being apparently structureless, and very readily broken up. It may be noted that the rounded knobs on the surface, which had given the idea of fluctuation, are, when cut into, seen to consist of a soft, semi-solid material, similar in colour to the great mass of the tumour.

Nothing untoward occurred to retard the healing of the wound, and the patient was dismissed on the 18th March.

In the Western Infirmary, within the past twelve months, I have removed four tumours, including the foregoing, from the same situation. In July, 1878, case of M. V—, female, aged forty-four; duration of tumour twenty-five years. Aug. 1878, case of J. S—, female, aged fifteen; growth of six years' duration. Jan. 1879, case of J. S—, male, aged thirty-three; period of growth six years; while in Mrs. M'D—'s case the growth had existed twenty-six years. Each case began as a small nodule behind the left ear; all grew slowly, and were painless from first to last; the whole four were freely movable on the subjacent tissues; in none was there any bulging into the mouth, or any affection of the skin; there was no facial paralysis or other pressure-effect in any of the four cases; all the patients were in perfect health; and in each case the tumour was easily removed. While thus clinically identical, they differed microscopically: the first being an adenoid myxoma; the second, a pure adenoid; the third, a myxoma; and the present case a myxosarcoma.

THE PAST WINTER IN DAVOS.

BY DR. CLIFFORD ALLBUTT.

(Concluded from p. 78.)

CASE 55.—Arrived Sept. 29th. Aged twenty-four. Frequent pleuritis twelve months, and twice severe hæmoptysis. Phthisis in left apex; right apex defective. Perfect recovery. Gained 18 lb. No hæmorrhage during stay. Left in March.

CASE 56.—Arrived Oct. 2nd. Aged forty. Phthisis in left upper lobe two years; dulness and moist râles all over it. Recovered well; was able to take long excursions. Left Davos April, 1879.

CASE 57.—Arrived Oct. 6th. Aged twenty-four. Phthisis, bilateral, twelve months; left lung the worse. Arrived with fever and progressive disease. Fever and advance stopped in four weeks; progressive recovery. Small cavity in right upper lobe closed, and this lung sound except limited dulness at apex. Left lung dry and contracting. Gained 10 lb. Feels well. Left Davos April, 1879.

CASE 58.—Arrived Oct. 7th. Aged forty-two. Cough and clergyman's throat some months. Phthisis in right lung. Lung recovered. Left Davos Feb. 1879, the throat still troublesome and secreting.

CASE 59.—Arrived Oct. 6th. Aged thirty-four. Dyspepsia many years and nervous disorders. Stomach recovered, but nervousness remains. Left Davos March, 1879.

CASE 60.—Arrived Oct. 7th. Aged twenty-six. Phthisis

in left apex; cavity. Cavity closed entirely, and infiltration vanished. Left in March as quite well. Gained 8 lb.

CASE 61.—Arrived Oct. 7th. Aged twenty-eight; worn-out young man. Commencing phthisis, bilateral. Recovery perfect; slight dulness still at left apex. Gained 10 lb. Left in April. This case at first sight was very unpromising.

CASE 62.—Arrived Oct. 10th. Aged twenty. Phthisis, bilateral, beginning with violent hæmorrhage. Profuse expectoration. Dulness in both apices, which disappeared entirely; at left apex the only remnant. Gained 11½ lb. Left, perfectly recovered, April, 1879.

CASE 63.—Arrived Oct. 11th. Aged thirty-six. Phthisis two years. Dulness in both upper lobes. Improved nicely. Dulness almost gone, but left apex unsatisfactory. Recovery incomplete. Left March, 1879.

CASE 64.—Arrived Oct. 11th. Aged forty. Hereditary phthisis in right upper lobe four years. Large cavity. Had severe pleurisy in Davos, and so progress arrested. Left March, 1879.

CASE 65.—Arrived Oct. 13th. Aged twenty-five. Phthisis in left lung; very low state. Fever not subdued; restless. Went, in Jan. 1879, to San Remo. Slight hæmorrhage occurred at Davos.

CASE 66.—Arrived Oct. 13th. Aged twenty-four. Bilateral phthisis. Large cavity, right apex; left apex dull. Moist sound, fever and sweats; gone in three weeks. No drawback. Recovered wonderfully. Left lung recovered; right lung dry and cavity contracting. Gained 13 lb. Left March, 1879.

CASE 67.—Arrived Oct. 15th. Aged forty-six. Asthma and clergyman's throat several years. Bronchitis; no signs of phthisis. Recovered. Asthma seldom. Health much better. Gained 12 lb. Caught cold shortly before leaving, and throat again troublesome. Left in April.

CASE 68.—Arrived Oct. 14th. Aged twenty-four. Hereditary phthisis; left apex. In four months gained 12 lb., and went on well, but was careless and lost in this way all he had gained, and left in March for South of France.

CASE 69.—Arrived Oct. 15th. Aged twenty-five. Hereditary phthisis. Cavity in right apex. Felt well all the winter, and scarcely any hæmorrhage. Gained weight. Cavity lessened. Went away in April far from cured.

CASE 70.—Arrived Oct. 20th. Aged fifty. Asthma; emphysema; chronic bronchitis and bronchiectasis; very nervous; cardiac palpitations; bad digestion; no appetite. Left in February for Italy. Reports no improvement there either.

CASE 71.—Arrived Oct. 22nd. Aged twenty-three. Hereditary phthisis; right, small cavity; two years. Good amendment. Lung better; cavity less and drier. Enjoyed life, and left January, 1879.

CASE 72.—Arrived Oct. 23rd. Aged twenty-five. Congestion of both apices; respiration defective; hereditary tendency. Gained 6 lb. Left March 30th, perfectly well.

CASE 73.—Arrived Oct. 24th. Hereditary phthisis; bilateral. Recovered strong and well. Left lung quite sound on departure, April 1st, 1879. Right apex still shows infiltration and bronchial respiration.

CASE 74.—Arrived Oct. 25th. Aged thirty-three. Hereditary phthisis, bilateral; chronic dyspnoea and diarrhoea. Lungs slowly improved; digestion did not. Diet ill borne. Went home, Feb. 1879.

CASE 75.—Arrived Oct. 25th. Aged thirty-two. Early phthisis in right side. Gained ground in first month, then caught cold repeatedly, and thus lung kept back. Left in March, 1879, with better physical signs, but health no better.

CASE 76.—Arrived Oct. 30th. Aged twenty. Phthisis in left side two years. General health improved; gained 7 lb. The whole left lung infiltrated. Left April, 1879.

CASE 77.—Arrived Oct. 30th. Aged twenty-four. Phthisis in left side; cavity. Very prostrate and weak; occasional diarrhoea and much digestive disorder. Is very home-sick. Lung got decidedly better, drier and less sputa. Fever and night-sweats cured; general health about the same. Left March, 1879.

CASE 78.—Arrived Oct. 30th. Aged twenty-one. Hereditary bilateral phthisis. Large cavity in left apex. Phthisical laryngitis. Got worse daily; far too ill to have left home. Returned home on Jan. 2nd. Died Feb. 7th.

CASE 79.—Arrived Nov. 1st. Aged forty. Phthisis in right side; extensive dulness; also ozæna. Good result. Gained 12 lb. Got strong and well. Left March 22nd. Lung cured; ozæna still troublesome, but not so bad as before.