Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF CYSTINURIA IN WHICH CADAVERIN WAS FOUND IN THE URINE.

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THE published cases of cystinuria, and especially those in which diamines have been found in the urine, are so few that the following is worth recording.

The patient was a girl, aged 12 years, who was seen in consultation by Dr. T. Churton of Leeds in January, 1900. In the course of a routine examination he unexpectedly found cystin crystals in the urine, and knowing that I was interested in such cases he kindly handed the specimen over to me. The urine which I received on Jan. 27th was rather pale in colour but did not smell of sulphuretted hydrogen¹ as is sometimes the case; the specific gravity was 1026 and the reaction was faintly alkaline; no albumin or sugar could be detected. Under the microscope a few six-sided plates of cystin with some triple phosphate crystals were seen. Diamines were sought for by the method of Udranszky and Baumann.² The whole available quantity of urine, 90 cubic centimetres, was vigorously shaken with three cubic centimetres of benzoyl chloride and 10 cubic centimetres of 10 per cent. sodium hydrate solution until the smell of the benzoyl chloride had disappeared. After standing, the precipitated diamines were separated from the phosphates, &c., which had also come down, by treatment with warm alcohol and subsequent reprecipitation with distilled water several times. Finally, a deposit of small white crystals was obtained which separated out from a perfectly clear mother liquid; this was filtered off, dried, and weighed. The dry weight was found to be 0.024 gramme. Microscopically the crystals presented the appearance of needles and narrow plates similar to those formed by benzoyl cadaverin; they were insoluble in ether but readily soluble in alcohol and strong sulphuric acid; the melting point was 129° to 130° C., characters which agree with those of benzoyl cadaverin. An attempt to prepare the picrate and double platinum salt was not successful, but this is not surprising considering the small amount of material; the yield was also too small to allow of an ultimate analysis being made. It can hardly be doubted, however, that the substance isolated from the urine was a diamine and that it consisted in all probability of pure cadaverin (pentamethylene-diamine, $C_5H_{14}N_2$).

Unfortunately, I have not been able to obtain any further specimens of the urine or a sample of the fæces, so that I am unable to say whether the excretion of cadaverin was a constant phenomenon or whether a diamine could be obtained from the solid excreta or not. The case is of some interest, however, not only because it adds one more to the 110 recorded cases of cystinuria, but also because it occurred in a female, and of the known cases only 30 are mentioned as being of that sex; further, the presence of cadaverin in a comparatively large amount is noteworthy, for, including Udranszky and Baumann's original case, this substance has been isolated from the urine in but five other cases of cystinuria, and one of these I examined with Dr. A. E. Garrod in 1899.³

Wakefield.

NOTE CONCERNING A SIGN OFTEN ASSOCIATED WITH EARLY PHTHISIS.

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IN many cases of pulmonary phthisis, but more particularly in those which follow the ordinary sequence of initial deposition and consolidation within the upper lobes accompanied by dulness in the supra-clavicular and suprascapular

areas, a number of venous varicosities one-third to two-thirds of an inch in length may often be observed beneath the skin in the neighbourhood of the spines of the seventh cervical and three upper dorsal vertebrae. They appear early and may become very conspicuous. At times they become apparent only after stretching the skin laterally. Local pain is occasionally felt, also slight œdema may be found over these vertebral spines. The following is an example.

The patient, aged 26 years, had suffered from cough since the beginning of April, 1901. It was probably due to influenza primarily. A note taken in the middle of May reads thus: "At the left posterior apex crepitant râles followed by slight expiratory murmur, in the lower lobe a click succeeds each inspiration; at the right posterior apex coarse râles audible, many rhonchi in lower lobe. Numerous varices visible around the spines of three upper dorsal; they occur, although sparingly, all over the left back as low as the angle of left scapula." A description of the venous ramifications of this region may serve to explain their origin. The venous network (dorsi-spinal) which lies around the dorsal spines, also furnishes branches which pass forwards between the transverse processes to join the vertebral veins in the neck and intercostal veins in the chest. The vertebral veins emerge from the transverse processes in the sixth cervical and terminate in the innominate. The veins of the upper two or three left intercostal spaces unite near the bodies of the vertebrae to form the left superior intercostal vein, which passes across the arch of the aorta to enter the left vena innominata, and the left bronchial vein opens into it. The right superior intercostal vein enters the vena azygos major. Bearing in mind these venous communications, the process by which any obstruction or deposition, be it tuberculous or not, begins to hamper the return of venous blood and leads to the formation of these spinal varices, becomes more intelligible. The obstruction may consist of enlarged and congested bronchial glands in the root of the lung, pressing upon the left superior intercostal vein during its passage across the arch of the aorta, or a thickened pleura may affect injuriously the course of the vein or any of its tributaries and lead to distal engorgement. It is important to recall the fact that the upper lobes lie tightly fixed within the three upper ribs and that they reach from the sixth cervical vertebra as far down as the third dorsal spine. The varices occur at first just within this area, between the spines and the edge of the shoulder-blade. Frequent coughing and the horizontal posture in bed, no doubt, will participate in and facilitate their production. Patients suffering from emphysema, asthma, and bronchitis, exhibit varicosities as well, but these are scattered over the chest, both front and back, and along the margins of the lower ribs, diffusely and indiscriminately. When the signs of obstruction clear the dilatations disappear, but the process requires some months. As the patient increases in weight and the fat layer beneath the skin becomes thicker, they would naturally appear less visible. In young children—five to ten years of age—who are rapidly growing or convalescing after influenza and measles, the veins are often marked and auscultation within the same region usually reveals some abnormality, tubular breathing, prolongation of inspiration, enfeebled breath-sounds, or creaking sounds. Such children are extremely vulnerable. They should be well fed and clothed, periodically weighed, and kept under observation for months.

The sign appears to me to be useful, and I have not come across it in any of the text-books and special treatises. The attention of the practitioner is at once arrested by it and the condition of the posterior apices of the upper and lower lobes determined. The presence of auscultatory signs within this dorsal area, combined with wasting and myœdema, I believe, render the diagnosis of early phthisis, even in the absence of sputum and bacilli, practically conclusive.

Clacton-on-Sea.

A CASE OF RELAPSING DIPHTHERIA.

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REFERRING to the annotation in THE LANCET¹ on the observations of Dr. Barbier and Dr. Lobligois regarding certain cases of "relapsing diphtheria" in the Hôpital Trousseau, Paris, the accompanying notes of a case may be of interest.

I saw the patient, a girl, aged seven years, on July 11th

¹ Journal of Pathology and Bacteriology, February, 1900.

² Zeitschrift für Physiologische Chemie, 1889, Band xiii., S. 562.

³ Journal of Pathology and Bacteriology, loc. cit.

¹ THE LANCET, August 3rd, 1901, p. 299.