On the whole, therefore, we may fairly conclude that whatever its cause the kidney disease in our case began at or about the time the symptoms showed themselves, that is, within a few weeks of becoming infected. Whether syphilis was the actual or only the predisposing cause cannot be with certainty decided, but the fact that similar cases have from time to time been recorded, and have completely recovered under antisyphilitic treatment, suggests that the relationship between the two conditions is a close one.

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THE VASOMOTOR SYSTEM IN TABES.

BY

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It is commonly recognized that the cerebro-spinal reflexes in tabes are always considerably impaired, but it is less generally known that similar perversions of functions are frequently present in the sympathetic system.

In investigating the functions of the sympathetic system it will be found convenient, if not physiologically accurate, to view this system as tripartite. (I) The pontine, which may be regarded as equivalent to the cerebral; (II) the spinal sympathetic chain equivalent to the spinal cord; and (III) the visceral terminations corresponding to the peripheral endings of the cerebro-spinal system.

I. The Pontine.

An interesting case is recorded¹ in which a condition of generalized capillary extravasation of blood in a tabetic was present, while it is worthy of mention that Professor Pal claims that the gastric crises of tabes are, as a rule, pontine vasomotor phenomena. He says the crises are invariably associated with a rise of arterial tension due to spasm of the peripheral vessels of the viscera. The heart also beats rapidly.²

II. Spinal Sympathetic.

As would be expected, the areas of the body involved in pathological changes in these regions are extensive. The following are the chief:

(a) *Oedema*.—The extremities are chiefly affected, either symmetrically or otherwise. It sometimes strongly suggests renal or cardiac disease; it may recur in the morning after disappearing at night, and is of variable duration, often only a week or two. R. Birnbaum records a case in which enormous oedema of the lower limbs and vulva, with extreme distension of the bladder (175 oz.),

complicated a four months pregnancy without obvious reason, until tabes was discovered.

(b) *Extravasations of Blood*.—Spontaneous bruise-like marks are not uncommonly observed, usually of a greenish-yellow colour and about the size of a shilling-piece. Straus describes them as "beginning with a bright red colour, passing through the various shades of brown, green, and yellow, until they finally fade altogether."³ But one would only expect this classical sequence of events with a superficial bruise.

(c) *Vaso-constriction*, as evidenced by anaemia, or blanching of the part, may affect merely the extremity of the limb, as in the case of "dead fingers," or actually the whole limb, sometimes producing a most alarming deadly-white appearance, lasting several minutes, to perhaps hours. Also the feeling of coldness in a part, and the "shiverings down the back" indicate the presence of vasomotor constriction, inasmuch as heat and cold sense disturbances are not present. Pembrey writes:

Shivering appears to be a response to the cooling of the sensory nerve endings produced by the marked constriction of the cutaneous arterioles, for external heat will abolish it.⁴

Coldness of the extremities is a common feature of tabes, even in warm climates. Capillary stasis, resembling senile peripheral endarteritis, or the condition termed erythromelalgia, precedes the occurrence of lightning pains in the vicinity at times. Indeed M. M. G. Guilan and J. Troisier record a case in which practically the whole surface of the body was involved in a manner typical of cadaveric lividity. Compression of the affected cutaneous areas induced a zone of "white asphyxia," gravity exerted a marked influence. The patient suffered constantly from cold extremities.⁵

III. Peripheral Vasomotor Disturbances.

(a) The application of cutaneous warmth. Merely enveloping the limbs in the bedclothes is often sufficient to produce a high degree of vaso-dilatation; a feeling of heat and distension is hence especially complained of after first getting into bed. In others immersion in a warm bath would produce a red suffusion of the whole skin.

(b) The application of cold produces the reverse effect. Merely exposing the chest will frequently induce an extensive cutis anserina.

(c) Since the vascular reactions consequent on stroking the skin with the finger-nail, which in certain instances produce the familiar *tache cérébrale*, are somewhat indefinite even normally, it would be unsafe to attribute any but the most striking results to a pathological condition. Persistent, intensely anaemic streaks result in tabes at times; while, on the contrary, in some instances hyperaemia is rapidly induced with the slightest stimulation. Indeed, numerous differences are presented; sometimes alternating hyperaemic and anaemic areas bound the streak, at other times dermatographia, and sometimes, but rarely, oscillatory vascularization. At the meeting of the Société Médicale des Hôpitaux de Paris, February 8th, 1909, M. C. Tinel called attention to the phenomenon known to French clinicians as the "white line" in the diagnosis of pathological conditions of the suprarenal bodies. M. Sergent, who first described it in 1903, found it also in septicaemia, the septic fevers, influenza, etc. At that time it was thought to be of important clinical significance in Addison's disease. Its presence in tabes and other conditions must undoubtedly modify these conclusions.

(d) The effect of trauma also on the peripheral vasomotor system is well illustrated in those numerous cases of spontaneous fracture or fragmentation in a joint which are so often associated with an otherwise alarming and bewildering state of oedema. A case is quoted by M. Touche in which an unguarded diagnosis led to a deep and extensive incision for pus.⁶ Such violent oedematous reactions also arise from toxic conditions, and should not be allowed too much scope in the prognosis, inasmuch as considerable subsidence follows immediately on rest.

Cases.

The following are notes of two cases out of an extensive series of cases from which the above conclusions are drawn:

A. K., seaman, aged 41, was subject habitually to cold feet and general coldness at night, and often could not keep warm

even when in the tropics and covered with blankets. For the past year he had had "cold shivering sensations" down the back and legs. On one occasion, six years after the onset of the disease, his legs underwent most alarming vasomotor and sensory disturbances. While sitting at the breakfast table he noticed a "numb feeling" in the toes, which slowly spread up the legs to midway between the pubes and umbilicus. The lower limbs were absolutely paralysed and, he fancied, anaesthetic. When undressed and placed in bed his legs were seen to be of a diffuse pale bluish colour, "as if mortification had set in," to use his words. The discoloration lasted two days, and on the first day he could not move the legs at all. On several occasions the legs, one or both, had been very swollen, even up as far as the thighs, leaving "pitting" on digital compression. The oedema more or less subsided during the night, but recurred daily for weeks. It was most marked when the perforating ulcers were most active. In fact, he came for treatment on the present occasion on account of inability to walk unaided, with extensive oedema and hyperaemia around a deep ulcer on the sole of the right foot. The presence of deep pus was confidently diagnosed, but in response to fomentations and rest the condition rapidly subsided without any discharge.

A. P., aged 58 years. One of the earliest symptoms was a sudden, extensive, painless, and unaccountable swelling of the whole of the right arm from the wrist to the root of the neck. It was variously diagnosed (phlebitis, acute inflammatory changes, etc.), but gradually subsided under rest. Within a few months thereafter the condition recurred. In half an hour the limb became enormously swollen, and this time of a lemon colour of varying intensity and darker on the outside of the arm. This condition lasted several weeks and then left the shoulder-joint disorganized and dislocated. At times his feet burned and he was obliged to cool them outside the bedclothes. His feet were habitually inclined to swell.

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TWO CASES OF CONGENITAL APHASIA IN CHILDREN.

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THE following cases, illustrating the forms of mental defect known as word-blindness and word-deafness, were met with during the course of medical inspection of the elementary school children. As they seem to be fairly typical examples of these conditions they appear to be worth recording.

CASE I.—Word-blindness.

V. C. (male), aged 12 years, was presented on account of his inability to learn to read. His teacher, who had had the boy under observation during the whole of his school career, believed that, except for the above-mentioned defect, he was of quite average intelligence. Most painstaking efforts had been made to teach him to read; for many years he had had extra tuition at school for this purpose, but with practically no result.

The family and previous history were unimportant and his general appearance presented nothing abnormal. Nutrition was fair. The expression was intelligent, muscular movements co-ordinated and active, and response normal. No obvious stigmata of degeneration were observed. Hearing and vision were normal. He answered questions readily, recognized by name all objects presented to him, but failed to spell the noun denoting a given object. He recognized single letters, but was unable to interpret the written word. Words of one syllable in an infant's reading book baffled him completely. If such a word was spelled aloud, for example, p o t, he said "top"; c a t, he interpreted as "fox." He wrote well from a copy, and had a good eye for form; he drew well from still life. One of his drawings represented an onion in section; below was written "Onion, cut across." When shown the word "onion," he named it correctly, doubtless from association of ideas; the two following words "cut across" he was unable to recognize. He could not write a single word from dictation, but could write his own name correctly, this being obviously mechanical, due to frequent repetition. He was a well-behaved lad, and, in short, except for the condition of word-blindness, was a normal individual. It was proposed that he should join the wood-carving class at the school, and he might possibly develop into a very fair carpenter, as he had an eye for form and considerable manual dexterity.

CASE II.—Word-deafness.

X. Y. (male), aged 8 years, Oriental by birth. The family was English speaking, and had been in this country for about a year. Family and personal history, so far as can be ascertained, had no bearing on the case.

Present Condition.—Fairly well nourished; muscular control was poor; the child jerked and twisted his arms and head con-

tinually. When spoken to he took no notice, and might easily be mistaken for a deaf child. A noise at once attracted his attention, and his teacher, who was an observant woman, was quite sure he was not deaf, as he responded by head movements to sounds made by the other children in the class. He attempted to reproduce the spoken word by lip reading, and succeeded to some extent. His brother, a very intelligent lad, communicated with him largely by signs. When shown an object and told its name he would repeat the word, watching the speaker's lips, but did not retain the memory of the word, even when again shown the object. The palate was very high and narrow; he was a mouth-breather, and post-nasal adenoids were present. His speech was markedly defective and the intonation resembled, in a slight degree, that peculiar to cleft palate (this might be due to the very high palatal arch). As words, however, meant nothing to such a child, he did not attempt to imitate them unless directly made to do so; he therefore did not learn to talk.

This child was doubtless less intelligent than the lad Case I, but possibly more so than the ordinary mental defective. He could probably be trained by lip-reading to understand the spoken word, and some such method would require to be adopted if he were to be taught to hold communication with his fellows.

THE TREATMENT OF RHEUMATIC DISEASES BY VACCINES.

BY

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THE extremely interesting article on the treatment of rheumatoid arthritis in the BRITISH MEDICAL JOURNAL by Drs. Bannatyne and Lindsay tempts me to place on record a few cases which have yielded to the same line of treatment with extremely satisfactory results.

While Resident Medical Officer to the Royal Hospital for Incurables, Dublin, some years ago, where there are always a very large number of chronic rheumatic cases, I was first struck with the peculiar sapraemic appearance of most of these patients, and in some of them it was possible to trace in the history the onset of the disease following upon some distinct infection, or subsequent to a chronic suppuration.

From experience with a large number of cases I believe the focus of infection can at times be ascertained, and although a few are probably due to a specific micro-organism, many cases are due to a general sapraemia following from a localized seat of infection.

Many cases have come under my notice where the focus of infection has been found microscopically to contain chiefly streptococci. In some cases even where no seat of infection—such as bad teeth, leucorrhoea, intestinal putrefaction, and colitis—could be found, I have used the anti-streptococcic vaccines with success. So many of these cases responded with such remarkable results that I think their use is justified in all doubtful cases.

Even in a case of acute articular rheumatism following on an attack of gonorrhoea with subsequent gleet, I have had success by the employment of antistreptococcic vaccines, where the injection of gonorrhoeal vaccines had failed. Examination of the discharge in many cases of gleet, indeed, will reveal the presence of streptococci when gonococci are absent.

Appended are notes on a few of these cases; they are not chosen only because the results of treatment have been to effect a complete cure, but because these patients have given me permission to publish their cases, and are willing to show themselves, and to state their own histories to any medical men who care to see them.

CASE I.

T. O., male, aged 38, hotel porter, consulted me in 1906, with a view to my using my influence on his behalf in the Royal Hospital for Incurables, where he was seeking election. At this time he was practically a cripple, being only able to walk a short way at a time on crutches. He was suffering considerable pain in almost every joint. The knees and ankles were greatly swollen, stiff, and extremely painful. His wrists were swollen and distorted; the neck was also stiff, and he was unable to raise his arms.

The case was a typical one of rheumatoid arthritis. He had had from three to four months' treatment in two of our city hospitals, and was eventually discharged, as he states himself, as incurable.

The evening temperature averaged 99.4°. He was thin and had some sweating at night, and there was considerable wasting of the limb muscles. There was no albuminuria or heart disease.