

## LETTERS, NOTES, Etc.

## THE MAGNESIUM WIRE TEST FOR LEAD.

DR. F. H. JACOB (Nottingham) writes: I am much obliged to Mr. Marsden for his letter of February 3rd (BRITISH MEDICAL JOURNAL, February 14th, p. 403), and feel that I owe him in reply a more detailed explanation of our methods and difficulties. I will first quote his original article from the *Lancet*, January 16th, 1897. "A strip of pure magnesium is placed in the fluid to be examined. Ammonium oxalate in the proportion of about 1 gram to 150 c.c.m. is added. If lead is present it is deposited on the magnesium. The slip is then washed with distilled water and dried. Confirmatory tests—(1) Warm the slip with a crystal of iodine—yellow iodide proves lead, cadmium may be ignored; (2) dissolve deposit in  $\text{HNO}_3$  and apply usual tests." (3) Examination of the deposit on the magnesium—After warming with iodine I dissolved the yellow deposit in hot distilled water in a watch glass and then evaporated very slowly to dryness; from the deposit obtained from 1 in 50,000 aqueous solution of lead I was able to obtain the characteristic flat yellow crystals of iodide of lead; from the deposit obtained from the urine, containing excreted—not added—lead, evaporated down to a 1 in 25,000 solution, I have been unable to obtain such crystals. Mr. Trotman has examined the deposit on magnesium by the usual tests for lead and has similarly failed to obtain proof in any case of excreted lead. (4) Purity of the magnesium.—Mr. Trotman has tested this and found a trace of iron, no other impurity. I cannot imagine that this would vitiate our results. (5) Concentration by evaporation.—There is nothing in the original communication to lead one to suspect its necessity, and unless one happened to be aware of the minute quantities in which lead is excreted in urine one would not dream of doing so. Moreover, it has certain practical difficulties. A fume cupboard is necessary on account of the unusually unpleasant odour. This at once removes the test from the category of clinical to that of laboratory tests. Suppose the urine to contain 1 mg. of lead per litre each 1,000 c.c.m. must be evaporated down to 50 c.c.m. to make a 1 in 50,000 solution. A very tedious process; at 50 c.c.m. many of the solids are deposited, and it will not dissolve further solids in the shape of one-third mg. of ammonium oxalate; if the solids be redissolved by acid the magnesium rapidly disappears. I have therefore put the magnesium into the evaporated urine without any doctoring, and have not yet succeeded in proving lead in the resulting deposit. Suppose the urine to contain 0.1 mg. of lead per litre it will now be necessary to evaporate 1,000 c.c.m. down to 50 c.c.m.; that is, practically to dryness, the test becomes now absolutely unworkable, yet this proportion of lead in urine is not an unusual one. I therefore maintain that this is a laboratory and not a clinical test, that it is not sufficiently delicate to be of use in the detection of such minute quantities of lead as occur in the urine, and, further, that in the experience of Mr. Trotman and myself it will not detect lead excreted in urine even when in a 1 in 25,000 solution. Finally, I should like to ask the rationale of adding ammonium oxalate.

## CANCER AND TUBERCLE.

MR. W. ROGER WILLIAMS (Clifton, Bristol) writes: In your abstract of Dr. McCaskey's essay on this subject in the BRITISH MEDICAL JOURNAL of February 14th, par. 25 of the EPITOME, there occurs the following statement: "In 281 necropsies of phthisical cases (141 by Williams and 145 by Kelypnack) cancer was found four times, or in about 1.4 per cent." Will you allow me to point out—since the authority for this statement appears to be my article on the pathology of cancer in vol. xvii, *Twentieth Century Practice of Medicine*—that this representation of the ascertained facts is altogether wrong? As I have not yet seen the original essay, I cannot say whether the mistake is due to the abstractor or to the author. The correct presentation of the subject, as it appears in the article referred to (p. 271) is as follows: "It is very rare to find both diseases in active progress in the same individual. I have met with this conjunction only twice in 136 cancer necropsies. Kelypnack, at the Manchester Infirmary, found it only twice in 145 similar necropsies. From what has been stated, it is obvious that there is a certain antagonism between active tuberculous disease and cancer."

## A SIMPLE METHOD OF OPERATING ON PILES.

AN ABERDEEN GRADUATE writes: In connexion with Dr. Mitchell's paper on the treatment of piles in the BRITISH MEDICAL JOURNAL of February 28th, permit me to say that practically the same plan was regularly adopted by Professor Ogston in the Aberdeen Royal Infirmary fourteen or fifteen years ago; in fact, I cannot recollect having seen him employ another method. He used a Pean's artery forceps for a clamp, and stitched with, I think, chromic catgut.

## AN ASSOCIATION OF WAR "CIVIL SURGEONS."

UNITY IS STRENGTH writes: Why do not the "Civil Surgeons" who served in the South African War form a permanent association, choose a president and secretary, and so keep in touch with each other and the public? Every one who knows their usefulness feels for their neglected status and the wretched way they were sent into the field. Without rank or official status they were at the mercy of any objectionable person who chose to be rude to them, and this condition was entirely owing to want of forethought and want of real sympathy with them in that branch of the War Office which is entirely to blame for the neglect. The association should not include the consulting surgeons sent out, whose condition is quite different.

## THE AGGLUTINATION TEST IN ENTERIC FEVER.

DR. ODERY SYMES (Clifton), writes: The case of supposed enteric fever in which no Widal's reaction could be obtained, reported by Dr. Wm. G. Dun in the BRITISH MEDICAL JOURNAL of March 7th, 1903, is of considerable interest, as it illustrates the growing tendency of the present time to cast doubt on the bacteriological test rather than on the clinical diagnosis. In the case reported no *post-mortem* examination was apparently made, so the diagnosis must remain a matter of doubt. It is unfortunate, too, that the blood was not tested with one or more cultures of paratyphoid bacilli, as from a clinical standpoint the case might equally well be one of paratyphoid fever. Before a case of failure of Widal's reaction is reported, it should first be shown that the typhoid bacillus was present; that all precautions were observed in taking the blood and performing the test; and that the blood gave no agglutinating reaction when tested with various strains of paratyphoid bacilli. Hasty and erroneous conclusions as to the limit of error in

Widal's test in enteric fever would thus be avoided. I should be glad to test the blood from any suspected cases of paratyphoid fever if sent to me at the Bristol General Hospital.

## CORRECTION.

THE counter-stain in the formula for Neisser's stain for the diphtheria bacillus was in the BRITISH MEDICAL JOURNAL of March 7th (p. 587), stated, through what was probably a clerical error, to be a solution of "benzoin," whereas Bismarck brown was meant. Benzoin is, of course, not soluble in water, and has no staining properties.

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## BOOKS, Etc., RECEIVED.

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Recherches Anthropométriques sur la Croissance des Diverses Parties du Corps. Par Dr. Paul Godin. Paris; A. Maloine. 1903. Frs 5.  
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On the Physics and Physiology of Protoplasmic Streaming in Plants. By Alfred J. Ewart, D.Sc., Ph.D., F.L.S. Communicated to Royal Society by Francis Gotch, D.Sc., Oxon., F.R.S. Oxford; Clarendon Press. 1903. 8s. 6d.  
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Transactions of the American Ophthalmological Society. Thirty-Eighth Annual Meeting. Vol. IV, Part III. Hartford (Conn.); Published by the Society. 1902.

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