Transport of Urine Specimens

SIR,—As you state in your leading article (10 May, p. 330), delivery of the midstream urine (M.S.U.) sample to the laboratory presents serious problems. We are constantly reminded of the importance of correct identification of causative organisms in the treatment of urinary tract infections. However, unless the sample is plated within two or three hours of passing, the M.S.U. is not only useless but can be very misleading.

Your readers may be interested to know how we have overcome this problem in our practice. Patients are sent home with the usual sterile bottle and printed instructions as to how to collect the specimen. They are urged to bring the sample back to the surgery as soon as possible, which, in the majority of cases, is less than an hour. On arrival the specimens are plated out on standard blood agar and MacConkey plates, supplied by the local pathology laboratory. The plates are then sealed with adhesive tape, labelled, and posted to the laboratory together with the specimen. The procedure takes a few minutes only. Once plating has been done the transport problem no longer exists.

In this way it is possible to plate out specimens within an hour or two of passing in the majority of cases. We have had very satisfactory results using this method—despite delays due to weekends and postal delays.

I would like to thank Dr. R. V. Young, Consultant Pathologist, Horton Hospital, Banbury, for his co-operation in supply us with the plates.—I am, etc.,

Bicester, Oxon.

H. MEADOWS.

Closed Method of Chest Aspiration

SIR,—In his letter (10 May, p. 386) Mr. N. R. Batey cites certain practical objections to the syringe, needle, and three-way tap method of chest aspiration, and proposes a method which he feels effectively overcomes its deficiencies.

I am afraid I neither agree with his objections nor feel that his method is superior in overcoming them. He states that the conventional method is time-consuming, but later admits to limiting the speed of fluid withdrawal owing to discomfort experienced by the patient to one litre in 10 to 15 minutes, a rate to which the syringe and tap naturally adapts itself. Air does not enter the pleural space when using this method; as he states, it is a closed system. However, when removing the needle from the cannula, and attaching first syringes for sampling and then tubing for aspiration, surely the pleural cavity communicates with the exterior. In the conventional method the fluid is aspirated and sampled without any direct communication with the atmosphere.

Finally, damage to the underlying lung and sepsis from the skin are both easily controlled if the needle is advanced slowly through the pleura until the fluid is reached and then held in that optimum position by the firm application of an artery forceps to the shaft of the needle at its point of entry into the skin. A plastic cannula cannot be so easily immobilized except with the use of plaster, which is generally unsterile.

I am sure that all these points were only too obvious to the majority of those reading

the original letter. Chest aspiration, however, is predominantly a chore delegated to pre-registration house physicians, who may not have adequate instruction or experience to recognize the basic fallacies entailed in Mr. Batey's thesis.—I am, etc.,

R. S. MACDONALD.

Worcester Royal Infirmary,
Worcester.

SIR,—There is rarely anything new in medicine, and I was interested to see Mr. N. R. Batey (10 May, p. 386) describe a method of aspirating very large pleural effusions which was in common use when I was a house-physician at Guy's in 1951. Apart from the use of disposable plastic materials the method was identical, and doubtless originated at a considerably earlier date.—I am, etc.,

St. George's Hospital,
London S.W.17.

D. J. STOKER.

Treating Asthma

SIR,—We should like to compliment Dr. Y. F. J. Choo-Kang and others on their careful work in a controlled comparison of three β -adrenergic stimulant drugs by inhalation in asthmatic patients (3 May, p. 287). However, we believe that 1.0 mg. of isoprenaline is an unnecessarily large dose and hope to publish evidence of this in the near future. In a recent dose-titration study one of us (K.M.H.) has shown that 90% of a representative group of asthmatic patients obtained maximum possible bronchodilatation after inhalation of 0.24 mg. or less of isoprenaline delivered by a pressurized aerosol. At this dosage level changes in pulse rate were minimal.

We agree entirely with Dr. Choo-Kang and his colleagues that the therapeutic value of β -adrenergic stimulants by inhalation is in the immediate relief of bronchospasm and not in day-long control of asthma. We therefore rather doubt whether the duration of action of the β -adrenergic stimulants is an important criterion of their value.

The prime need of asthmatic patients is immediate and substantial relief of acute bronchospasm. Inhalation of isoprenaline fulfils this need in a dose much smaller than is generally realized. Since isoprenaline is rapidly metabolized, this small dose may be safely repeated at hourly intervals if required.—We are, etc.,

L. FEINMANN.

Queen Elizabeth Hospital,
Gateshead, Co. Durham.

K. M. HUME.

King Edward VII Hospital,
Midhurst, Sussex.

Blood Group A and Typhoid Infection

SIR,—Since 1954, when you suggested in a leading article¹ (7 August, 1954, p. 347) that the chemical and serological similarity between gonadotropic hormone and blood group A should be investigated, there has been a growing interest in the distribution of ABO blood groups in a number of diseases. I think that even typhoid infection could be profitably studied from this point of view.

I have been puzzled by the fact that man is

sensitive to *Salmonella typhi*, while our experimental animals are not. There are probably many reasons for this phenomenon: for example (a) the possibility that the human body has a biochemical substrate enabling growth of *S. typhi* from a very small initial inoculum, and that this substrate is missing in experimental animals, and (b) the human body has an immunological tolerance to typhoid antigen—that is it lacks the capability to provide an immunological response to typhoid antigen.

Considering for a moment the second possibility, I think that special consideration should be given to the Vi typhoid antigen for the following reasons: (1) Antibody titres to Vi antigen in humans infected with *S. typhi* or vaccinated with typhoid vaccines are usually quite low. (Somatic and flagellar antigens of *S. typhi*, on the contrary, give a good antibody response.) (2) All typhoid strains isolated from human cases possess a good Vi envelope, and pathogenicity of typhoid strains is usually correlated to presence or absence of Vi antigen. (3) Muschel *et al.*² have found that human blood group A substance is antigenically similar to purified typhoid antigen. If this is the case, obviously people belonging to blood group A cannot produce antibody to the Vi antigen and are therefore more susceptible to typhoid infection.

I have to mention here that I tried to prove this theory experimentally, but failed to increase susceptibility of experimental animals to typhoid infection by inducing immunological tolerance to Vi antigen.³ I presume, however, there may be a number of reasons—such as contamination with other typhoid antigens—to explain this failure.

I think, therefore, that it would be quite interesting from an epidemiological point of view to find out whether blood group A substance confers on humans increased susceptibility to typhoid fever, and I wonder whether it would be possible to obtain data regarding the blood group type of typhoid patients and typhoid carriers.—I am, etc.,

B. B. DIENA.

Biologics Control Laboratories,
Laboratory of Hygiene,
Department of National Health
and Welfare,
Ottawa 3,
Ontario, Canada.

REFERENCES

- ¹ *British Medical Journal*, 1954, 2, 347.
- ² Muschel, L. H., and Osawa, E., *Proceedings of the Society for Experimental Biology and Medicine*, 1959, 101, 614.
- ³ Diena, B. B., Wallace, R., and Greenberg, L., *Revue Canadienne de Biologie*, 1968, 27, 163.

Miliary Tuberculosis in the Elderly

SIR,—In a leading article on this subject (3 May, p. 265) there is a statement, "Diagnosis is readily confirmed by the presence of tubercle bacilli in cultures of (my italics) sputum, urine, or cerebrospinal fluid."

Since it may take up to six weeks or longer to identify *Mycobacterium tuberculosis* in cultures of material collected from patients, there is an urgent need to detect these organisms as quickly as possible by suitable microscopical examination of appropriate material. The immediate examination of specimens by means of fluorescence microscopy, as well as by more traditional methods