Letters to the Editor

An Alternative to the Sickling Test

Working in a laboratory which performs some 20 sickling tests per week, I agree with the comment of Canning and Huntsman (this Journal, Nov. 1970, 736-7) that the Sickledex test is rather costly for routine use but that the orthodox sickling test is relatively time-consuming and occasionally gives an erroneous result.

We have accordingly prepared a reagent based upon that used by Yakulis and Heller (1964) for their slide test. This is a 2.45 M phosphate buffer (K_2HPO_4 , 214 g, KH_2PO_4 , 167 g, water to 1 litre) containing 1 mg/ml of sodium dithionite, with saponin as a lysing agent. The reducing agent is dispensed in stoppered plastic tubes marked with the number of milligrams, together with the dry saponin; for use, the contents of a tube are dissolved in the appropriate volume of buffer; the test procedure is exactly as described for Sickledex. The reagent is used only on the day of preparation.

A series of 180 tests have been checked by cellulose acetate electrophoresis of the haemoglobins: positive results were obtained with 22 AS and four SS bloods; 145 AA and nine AC bloods were negative. Two of the positives had previously been reported as negative with a slide sickling test.

It is important to remember that rapid solubility tests, such as Sickledex and the one described here, can also give false negatives if the reducing agent is present in inadequate concentration or has been allowed to deteriorate; if this is the case, however, the tubes will show the bright pink colour of oxyhaemoglobin not the blue-pink of deoxyhaemoglobin. Only if technicians are trained to recognize and look for this colour difference can a positive control be omitted; a normal control should always be used to ensure that lysis is effective to prevent the reporting of an analysed red cell suspension as 'positive'. I would maintain that these precautions apply equally to the use of Sickledex as to our cheaper substitute.

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Cellular Contamination during Automatic and Manual Staining of Cytological Smears

The article by Barr *et al* in your current number, with the conclusion that the most important of all methods aimed at preventing contamination is the constant recognition of its possibility, is a most timely one.

We encountered a more exotic form of contamination six years ago when we started using automatic staining techniques for cytological preparations. A sputum from a female patient was found to contain large numbers of spermatozoa, and investigation soon revealed that the batch had contained a number of smears from a hydrocele aspirate.

May I, however, use this opportunity to bring to the attention of your readers another equally important aspect of contamination in cytology.

When the Department of Health made screening facilities available for general practitioners, arrangements were made to supply them with kits for taking cervical smears. One of the items provided was a blue plastic container which holds four slides, and is disposable.

At the time, we felt that it would be a wise precaution to advise the use of a disposable plastic sleeve into which the slide could be placed before being deposited in the container for transmission to the laboratory. This idea was suggested by the late Dr Peter Smith and Mr J. Higgins of the Christie Hospital. It had the additional merit that if the slide was accidentally broken in transit the fragments were not mixed up with any other broken slides in the container, and almost invariably reconstruction of the slide is possible.

We made it a rule that any container in which slides were without plastic sleeves were to be discarded for incineration. We took the additional precaution of sterilising the wooden spatulae in batches of 50 in the autoclave, as it had been suggested they might harbour staphylococci. Our cultures of spatulae did not yield any growth of significance, but we have continued this practice.

During the last four years these blue containers have been found to be very useful by our colleagues for transmission of all sorts of slides, for both fixed and unfixed biological material. We think that there is a risk that these containers may harbour infective particles, and even if this risk is a theoretical one, we would urge the use either of plastic sleeves or the

Book reviews

Sensitization to Drugs Edited by S. B. de C. Baker and J. Tripod. Proceedings of the European Society for the Study of Drug Toxicity Vol. X. (Pp. 256; illustrated. £6 14s.) Amsterdam: Excerpta Medica Foundation. 1969.

This volume contains a very diverse series of 27 articles concerned with toxicity and teratogenic effects as well as sensitization to drugs which is implied in the short title. The first article deals with anti-nuclear factors and drug treatment and the last is concerned with the teratogenic effect of trifluoperazine thalidomide and other drugs in rabbits and mice. A paper of very topical interest is that by G. F. Somers on the 'Evaluation of drugs for foetal toxicity and teratogenicity in the rabbit'. The author points out that too great a reliance on the rabbit as a test animal may be misplaced and that drugs other than thalidomide may exert teratogenic effects on some animals, but not necessarily on the rabbit.

B. Halpern and his colleagues from the Institut d'Immuno-biologie in Paris have studied the immunological mechanisms which may be involved in certain forms of drug hypersensitivity. In particular, the lymphoblast transformation test has been used in patients who have become allergic to penicillin, other antibiotics, or aspirin. These workers found the lymphoblast transformation test of considerable value in the detection and diagnosis of drug allergies.

It is not possible in a short review to mention more than a few of the subjects which are dealt with in this report. A brief paper deals with the Swedish experience of jaundice complicating the use of oral contraceptives, and a more

Cellular contamination during automatic and manual staining of cytological smear—concluded

destruction of such containers after being used once.

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