RESULTS

The table shows that since the introduction of our present culture method all 31 specimens received have been successfully cultured. Four were lost in the harvesting and we believe we have now improved our technique. The number of successful cultures is now 60 and in this sample we have found three chromosome abnormalities.

We should like to thank the Institute for Research into Mental Subnormality and the South West Metropolitan Regional Hospital Board for financial support of this project without which it would not have been possible. We should also like to thank Mrs B. Minton for the extra hours she spent typing this paper.

References

- Gray, C., Davidson, R. G., and Cohen, M. M. (1971). A simplified technique for the culture of amniotic fluid cells. *J. Pediatr.*, **79**, 119-122.
- Jacobson, C. B., and Barter, R. H. (1967). Intrauterine diagnosis and management of genetic defects. *Amer. J. Obstet. Gynec.*, **99**, 796-807.
- Nadler, H. L., and Gerbie, A. B. (1970). Role of amniocentesis in the intrauterine detection of genetic disorders. *New Engl. J. Med.*, **282**, 596-599.
- Nelson, M. M., and Emery, A. E. H. (1973). Amniotic fluid cell cultures. *J. med. Genet.*, **10**, 19-22.
- Paul J. (1970). *Cell and Tissue Culture*, 4th ed. Livingstone, Edinburgh and London.
- Steele, M. W., and Breg, W. R., Jr. (1966). Chromosome analysis of human amniotic fluid cells. *Lancet*, **1**, 383-385.
- Valenti, C., and Kehaty, T. (1969). Culture of cells obtained by amniocentesis. *J. Lab. clin. Med.*, **73**, 355-358.
- Wagner, G., and Fuchs, F. (1962). The volume of amniotic fluid in the first half of human pregnancy. *J. Obstet. Gynaec. Brit. Cwllth*, **69**, 131-136.

Screening of vasectomy specimens

P. J. WESTWOOD AND A. C. HUNT *From the Histopathology Laboratory, Plymouth General Hospital, Plymouth*

It is the usual practice following the operation of male sterilization by vasectomy to submit the excised length of vas deferens for histological confirmation of its structure. With the increasing popularity of the operation the number of specimens is forming a real burden to many histology laboratories. In the last year in Plymouth, specimens were examined from 590 patients, forming 7% of the total histopathology requests.

It is customary in most laboratories to embed and section each vas and to treat them in exactly the same way as other specimens to be subjected to histopathological investigation. The extra work load for pathologists is minimal, and of the 1180 specimens examined in 1972 in this laboratory all were confirmed to be vas deferens and no pathological changes were seen in any. The work load falling upon the technical staff, however, is considerable and an effort has therefore been made to find a quick screening test.

Methods

Specimens are received in buffered neutral formalin and stored and examined in batches.

Each vas deferens is divided transversely with a razor blade and as thin a slice as possible cut by hand with the razor blade. The resulting slice is held in a pair of watch-makers forceps and dipped for a few seconds in aqueous methylene blue, washed briefly in distilled water, then in 70% alcohol, followed by a further quick wash in distilled water. It is then mounted on a slide under a cover slip in Apathy's medium.

Results

By this very simple technique the vas can easily be recognized (see fig). The longitudinal folds in the mucosa, and the very thick intermediate circular muscle layer are quite characteristic. In cases of doubt, material can be embedded and sectioned in the usual way. Control specimens of arteries and veins of similar size have been examined and there is no difficulty in distinguishing these from the vas deferens.

Received for publication 29 June 1973.

Fig Transverse section of vas deferens stained methylene blue $\times 25$.

Preparations are not permanent and are discarded immediately after examination. The specimens of vas deferens are kept until the result of the third postoperative semen examination is known. The question of retaining material for medico-legal purposes does not in our opinion arise any more in the examination of the histology than it does in, for example, the examination of the semen.

Comment

By the use of this simple technique we calculate that we have saved more than half a day's technician-time per week, a saving of some significance in a histopathology laboratory of district general hospital size.

Direct microscopy of uncentrifuged urine

P. E. MANSELL AND A. M. PEACOCK *From the Department of Microbiology, Middlesex Hospital Medical School, London*

Cell counts on centrifuged specimens of urine are unreliable, inaccurate, and time consuming (Little, 1962, 1965; Stansfelt, 1962; Gadeholt, 1964; More, Hira, and Stirland, 1965). Counting chambers are expensive and inconvenient in use when large numbers of specimens have to be examined. To overcome these objections, modified slide-chamber methods have been described (Hilson, 1964; Mair Thomas, 1971; Petts, 1972). Described here is a method utilizing glass 'well-slides'.

Method

The urine sample is well mixed and 3 drops ($\equiv 0.1$ ml) of undiluted urine pipetted into the well of a 'well-slide'¹. Those used were described by the manufacturers (Baird and Tatlock) as being $76 \times 60 \times 1.25$ mm ground edges with polished depressions 15 mm diameter approximately 1 mm deep. We found the maximum depth of the depression to be 0.44 and 0.47 mm and the depression diameter between 14 and 15 mm. A coverslip² (Chance no. 1 22 $\times$ 22 mm square and 0.14 to 0.16 mm thick) is placed on top of the filled well and the urine is examined under $\times 40$ objective of a Watson Microsystem 70 microscope with $\times 10$ eyepieces.

The well is scanned and five fields in the area of the centre of the well are counted. The slides are discarded into 2% Hycolin and the following morning washed, rinsed, and dried.

The cells in the urine samples were also counted in parallel in a modified Fuchs Rosenthal counting chamber (depth 0.2 mm). The samples were examined undiluted and enumerated by counting the cells in 80 small squares.

Results

Figure 1 compares results of well slide and counting chamber 0-50 cells/mm³. Figure 2 compares results of well slide and counting chamber 50-350 cells/mm³. It will be seen that there is good agreement in both the ranges between the two techniques.

¹ Baird & Tatlock, Freshwater Rd, Chadwell Heath, Essex.

² Chance Bros, 29 St James Street, London SW1.

Received for publication 29 June, 1973.