

be achieved, so reducing the chance of other red cell antibodies forming in the recipient. Finally, the system devised has significant economical advantages: none of the original cell donation needs to be wasted, and the equipment and running costs have been calculated to be no more than 60p per aliquot (excluding labour).

References

Jenkins, W. J., and Blagdon, J. (1971). The long term storage of blood for transfusion using an improved container for freezing the red cells in liquid nitrogen, *J. clin. Path.*, **24**, 685-689.

Krijnen, H. W., Kuivenhoven, A. C. J., and De Wit, J. J. F. M. (1970). The preservation of blood cells in the frozen state. In *Modern Problems of Blood Preservation, International Symposium, Frankfurt/Main, 1969*, edited by W. Spielmann and S. Seidl, pp. 176-183. Fischer, Jena.

Mitchell, R., and Muir, W. (1972). Storage, retrieval and inventory control of donor red cells in liquid nitrogen. *J. clin. Path.*, **25**, 487-490.

Pert, J. H., Schork, P. K., and Moore, R. (1965). Low temperature preservation of human erythrocytes. *Bibl. haemat. (Basel)*, **23**, 674-682.

Rowe, A. W., Eyster, E., and Kellner, A. (1968). Liquid nitrogen preservation of red blood cells for transfusion: a low glycerol rapid freeze procedure. *Cryobiology*, **5**, 119-128.

Sherwin, G. A. (1956). An infection hazard of blood collection. *J. Med. Lab. Technol.*, **13**, 468-469.

Letters to the Editor

A Simple Aid to the Administration of Blood Product Concentrates

We have found that nylon catheter mounts are useful for the efficient withdrawal from plastic transfusion bags of blood products such as cryoprecipitate and platelet concentrate.

The mounts (ref 700/180/Luer) are made by Portex Ltd of Hythe, Kent, and can be attached directly to a syringe. Their conical shape makes them a snug fit in the port of a blood bag. They are firm enough to pierce the membrane in the port but the end is not sharp and will not damage the wall of the bag. Their length (5 cm) is sufficient for the tip to lie just within the margin of the bag.

With one of these mounts, the contents of several bags can quickly be aspirated into a single large syringe. The mounts can be autoclaved for re-utilization.

I am grateful to Mr H. Byram, SRN, Superintendent of CSSD, Royal Lancaster Infirmary, who recommended these mounts.

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Type III Hyperlipoproteinaemia and Sink- ing Prebeta Lipoprotein

In our study of the kindred of a patient with type III hyperlipoproteinaemia (*J. clin. Path.*, 1973, **26**, 163), we postulated that a son of the proband exhibited a stage in the development of the type III disorder. His electrophoretic strip revealed

chylomicrons and an increased prebeta band without lipoprotein of D < 1.006 with beta mobility. On re-examination one year later, this patient has since developed a definite type III hyperlipoproteinaemia in that beta lipoprotein of D < 1.006 has now been detected in his plasma; this confirms our previous hypothesis.

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Neonatal Meningitis Caused by *Citrobacter koseri*

The outbreak described by Gross, Rowe, and Easton (1973) is of interest because we have recently encountered a similar outbreak with four cases in our own premature baby unit (Gwynn and George, 1973) and know of one further case in another baby unit in this city (Bridgwater, 1972, personal communication). *Citrobacter koseri* may therefore be a more frequent cause of neonatal meningitis than has been recognized in the past and its potential pathogenicity in baby units seems clear.

Studies in our own unit suggested that intestinal carriage was important. The organism was recovered from the bowel of several unaffected infants and also from a member of staff at one stage. The outbreak was controlled, without need for closing the unit, by regular screening of all babies and by isolating

carriers. The unit has remained free of the organism in the 10 months since the outbreak. Sensitive methods for detecting the organism were required and we find overnight culture of a saline suspension of stool in selenite F with subculture to MacConkey agar containing 10 µg ampicillin most useful in this respect.

A more detailed account of our methods and of the incidence of this organism in different situations is being prepared for publication.

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References

Bridgwater, F. A. J. Personal communication.

Gross, R. J., Rowe, B., and Easton, J. A. (1973). Neonatal meningitis caused by *Citrobacter koseri*. *J. clin. Path.*, **26**, 138-139.

Gwynn, C. M., and George, R. H. (1973). *Citrobacter koseri* meningitis. *Arch. dis. Childh.*, in press.

Correction

In the paper by Freedman *et al* (*J. clin. Path.*, 1973, **26**, 261-267) the illustrations shown for figs 1 and 2 have been transposed.