Letter to the Editor

A simplified method for detecting fluorescent antibody to rotavirus: its application to sero-epidemiology

Serological investigations into human rotavirus infections have involved the use of antigenically related non-human strains (Kapikian *et al.*, 1975; Ørstavik and Haug, 1976) or rotavirus obtained from human faeces using complicated technical methods (Gust *et al.*, 1977).

By adapting a method previously described for the identification of rotavirus in faeces (De Silva and Marshall, 1977), we have developed a simple technique of antibody detection using a human strain of virus as antigen and used it to study the spread of rotavirus in the community.

Two hundred and sixty-three samples of serum from patients, mainly inpatients, in the Bedfordshire and North Hertfordshire areas were screened for rotavirus antibody at a dilution of 1:4. Monolayers of pig kidney cells (strains IB-RS-2), grown on Teflon-coated slides as previously described (De Silva and Marshall, 1977), were inoculated with a faecal extract containing sufficient rotavirus to produce 10-15 infected cells per disc when harvested after 18-24 hours' incubation at 37°C. Infected discs of cells were treated with serum dilutions for 30 min at 37°C, washed with phosphate-buffered saline (PBS), reacted with FITC-labelled sheep anti-human IgG conjugate for 30 min, again washed with PBS, and counter stained with Evans blue. They were examined using a Leitz Dialux microscope with iodone quartz illumination.

The results are shown in the Table. Although the numbers are small, the results are broadly in agreement with previous reports from large conurbations (Kapikian *et al.*, 1975; Middleton *et al.*, 1976; Ørstavik and Haug, 1976), indicating that infection occurs very early in life, 90% of children in the 5-9 years age group possessing antibody.

The method described uses a strain of human rotavirus and simple tissue culture

and fluorescent antibody techniques. Large numbers of infected cell preparations (up to 12 per slide) can be prepared, fixed, and stored at -20 until required, making the method useful for sero-epidemiological studies and, by analogy with previous studies of other virus infections (De Silva, 1972) the serodiagnosis of rotavirus infections by estimation of specific IgG, IgM, and IgA antibodies in single and paired sera.

We wish to thank Dr J. Nagington, Public Health Laboratory, Cambridge for confirming the identity of the strain of rotavirus used.

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Book reviews

Lupus Erythematosus: A Review of the Current Status of Discoid and Systemic Lupus Erythematosus and their Variants, 2nd edition, edited by E. L. Dubois. (Pp. xv + 798; illustrated; £25.) Los Angeles: University of Southern California Press. 1976.

The second edition of this classic textbook was published in 1974. So much research had appeared by 1976 that it was decided to add some progress reports before reprinting. The present volume contains about 200 new references and covers newer aspects, such as 'mixed connective tissue disease', which can be distinguished from SLE by precipitin tests for ribonucleoprotein antibodies. The book has almost doubled in size since it first appeared in 1964; it is still by far the most useful and popular text on the subject. No laboratory or hospital should be without it. The price is exceptionally cheap for this comprehensive and essential reference book. In future editions it will be necessary to prune it and remove some of the obsolete investigations, which are now mostly of historical interest.

D. DONIACH

The Gastrointestinal Tract. (International Academy of Pathology Monograph No. 18.) Edited by John H. Yardley, Basil C. Morson, and Murray R. Abell. (Pp. xii + 223; illustrated; \$23.00.) Baltimore: the Williams and Wilkins Company. 1977.

Comprising a series of papers on selected topics in gastrointestinal pathology, this book places particular emphasis on colonic disease. As expected, the recurrent problem of differentiating between ulcerative colitis and Crohn's disease is discussed in detail. An excellent review of colorectal biopsy in inflammatory bowel disease in general puts this problem into perspective, and further sections on ischaemic disease and infective disturbance provide a timely reminder of the scope of intestinal lesions. The importance of colonic cancer is reflected by the informative papers dealing with the aetiology and pathogenesis of this tumour, and the account of prognostic factors rightly draws attention to the value of detailed pathological assessment of colonic neoplasms.

Table Age incidence of IgG fluorescent antibody to rotavirus

	Age group (years)					
	0-4	5-9	10-14	15-34	35-64	≥65
Number tested	38	30	35	60	57	43
Number positive	29	27	28	49	42	35
Percentage positive	76.3	90.0	80.0	81.7	73.7	81.4