Group B streptococcal serotypes correlated with maternal parity and carrier sites

We were interested in the observation of Islam¹ that primigravidae and second gravidae were almost exclusively colonised by group B streptococci (GBS) of types I, R, X and non-typable isolates with a conspicuous absence of type III strains. In a study based at the Royal Berkshire Hospital, Reading and undertaken between July 1979 and February 1980 we found a much more even distribution of serotypes (Table 1).

This study will be reported fully elsewhere, but, in brief, low vaginal and anal swabs were taken from 30 mothers whose babies had been found to be colonised by GBS (group I) and from a control group of 50 mothers whose babies were not colonised by this organism (group II). After being transferred to the laboratory in a selective transport medium, the swabs were cultured on an enrichment medium and then subcultured on Columbia blood agar supplemented with defibrinated horse blood (10% vol/vol), nalidixic acid 15 mg/l and neomycin 30 mg/l. The isolates were serologically typed using modified Lancefield acid-extracted antigens, serotyped by precipitation tests in gel and phage-typed.² The mothers and babies had further upper respiratory, anal and low vaginal swabs taken at home at monthly intervals for the next 12 weeks.

Twenty-eight (93%) mothers from group I and 12 (24%) mothers from group II were found to carry GBS at some time during the study period. In contrast to Islam's findings we did not find that any serotype favoured any particular site (Table 2).

Anal, urethral and upper respiratory swabs were also taken from fathers on one occasion during the follow-up period. Fourteen of 28 (50%) of fathers of babies who had been colonised by GBS at birth (group I) and 11 of 45 (25%) of fathers of uncolonised babies (group II) were GBS carriers. In all cases, the strains isolated from the father's urethra were indistinguishable both serologically and by phage type from their consort's isolates. One husband carried a serotype III in his nose in addition to the "family strain" isolated from the anal swab and carried by the rest of the family (serotype Ia). Two other fathers had a strain in the anus which was different to their family strain.

In common with Sanderson *et al*³ reporting in the same January issue of this Journal, we found that the anorectal

Table 1 Group B streptococcal distributions correlated with parity

Parity	n	Serotype distribution*				
		I	II	III	NT	R or X
Para 1	17	7	4	5	1	0
Para 2	16	6	7 ^a	2	1	1
Para 3	5	2	1	2	1 ^b	0
Para 4	1	0	0	0	1	0

*Serotype I comprises Ia, Ib, Ic; II comprises II, IIR, II/Ic; III comprises III, IIIR.

^a = one subject colonised by type Ib and IIR

^b = one subject colonised by type III and NT

NT = non-typable.

Table 2 Site of culture compared with serotype in 40 women (see text) during 12 weeks post-partum

Site	Serotype distribution*					Total
	I	II	III	NT	R or X	
Low vaginal swab	32 (22%)	26 (18%)	17 (12%)	8 (5%)	2	146
Anus	32 (22%)	22 (15%)	20 (14%)	6 (4%)	2	143
Throat	4	2	4	0	0	108

*Serotype I comprises Ia, Ib, Ic; II comprises II, IIR, II/Ic; III comprises III and IIIR.

NT = non-typable.

region was the commonest site of colonisation in babies, mothers and fathers. We feel that the high urethral carriage among fathers of babies who became colonised by GBS may have important epidemiological implications, but we are unable to confirm the effect of parity.

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Role of the Schwartzmann reaction in necrotising enterocolitis

In the paper by Gray and her colleagues,¹ comments on the role of the Schwartzmann reaction in necrotising enterocolitis are

made, together with the assertion that there was "never any clinical evidence to support" the theory that this reaction may underlie enterocolitis. In the paper by Fraser and myself² we comment on a child whose colostomy was observed during a circulatory collapse which was followed by the clinical picture of necrotising enterocolitis and where changes suggesting a Schwartzmann reaction were found. This, in fact, lead to our subsequent experiments reproducing colitis of this type by the Schwartzmann reaction in the rabbit.

The study by the Aberdeen group is particularly valuable in that immunofluorescence studies have been carried out. Studies of this type will enable the pathogenesis of the syndrome to be determined and any pathologist seeing this lesion would be advised to freeze some of the tissue from the affected gut.

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Book reviews

Tumors of the Lower Respiratory Tract. 2nd series. Atlas of Tumour Pathology. D Carter and JC Eggleston. (Pp 361; illustrated; \$15.00.) Armed Forces Institute of Pathology, Washington. 1980.

Carter & Eggleston have made an excellent job of rewriting Tumors of the Lower Respiratory Tract. This 17th fascicle of the 2nd series replaces Liebow's 1952 edition and is a worthy successor. The all-too-common bronchogenic carcinomas are of course well covered but these fascicles are just as much consulted for information on the oddities and I could detect no omissions in this area. The rarer neoplasms are dealt with succinctly and sections on inflammatory pseudotumours and hamartomas ensure full coverage of primary and secondary tumours of the lower respiratory tract, including the pleura. The nomenclature used follows the WHO classification fairly closely and seems eminently sensible. It is based essentially on histogenesis and the book commences with an outline of lung development and normal structure. This is followed by an interesting chapter on tumour detection, localisation, and staging which touches on the various biopsy techniques of use in this area and provides an excellent account of cytological diagnosis. The many illustrations are of high quality and special praise is due for the colour plates of cytological abnormalities. Electron microscopy is not neglected but most of the pictures are of good quality black and white photomicrographs. This volume will be invaluable to the diagnostic histo- and cytopathologist.

B CORRIN

The Lymphocyte. Progress in Clinical and Biological Research. Vol 58. Eds KW Sell and WV Miller. (Pp 242; illustrated; £23.20.) Allan R Liss inc. 1981.

In a symposium held in 1980 most of the very diverse aspects of lymphocyte function were considered. The reviews vary from a three-page summary on T-cell analysis by monoclonal antibodies to

12-15 pages on topics such as the structure, disease associations, and role in cytotoxicity of the HLA system. Knowledge on immune regulation and its disorders, on lymphokines, and on NK cells is summarised, and two sections deal with lymphocyte culture and the role of lymphocytes in erythropoiesis. Other topics—thymic hormones, biochemical defects of lymphocytes, and the therapeutic potential of cultured thymus fragments, as well as the immunological analysis of ALL—have a more direct clinical relevance. The quality of the contributions is high and in such a fast-moving subject this volume is a very acceptable help in keeping (almost) up to date.

HEM KAY

Theory and Practice of Histotechnology. 2nd ed. DC Sheehan and BB Hrapchak. (Pp 481; illustrated; £21.) YB Medical Publishers Ltd. 1980.

This is a strongly bound and well-indexed histopathology laboratory bench book which should have staying power and be easy to use. The first chapter, consisting mainly of details of the use of automatic tissue processors and knife sharpeners, gives an unfortunate impression that histopathological technique is more a matter of machinery than of science or skill. The following chapters correct this as the theory and scientific basis, as well as the practice, of histological techniques are described. The laboratory office staff and those who prepare or report stained sections have something to learn from this book as the text includes glossaries of medical and scientific terms, work flow charts, transatlantic health and safety practices, and quality control programmes in addition to the usual technical methods.

RAB DRURY

Clinical Biochemistry Reviews. Vol 2. Ed DM Goldberg. (Pp 433; illustrated; £17.) John Wiley & Sons Limited. 1981.

The stated purpose of these reviews is to summarise in a critical fashion the important papers in each of the areas covered over a single calendar year. They are concise and well written. Fourteen topics are covered, varying from Laboratory Management to Toxicology, Therapeutic Drug Monitoring, and the Biochemical Aspects of Genetic Disease. Each is discussed by an expert in his own

field and, as one might expect, the commentaries are pertinent and precise concerning the situation up to the end of 1979.

The attractiveness or otherwise of such a book is really determined by the degree of specialisation of the reader. Few practitioners in the clinical biochemistry field have a particular interest in more than two or three of the topics covered and if one does not have this updating of papers on a yearly basis is not really relevant, particularly at a cost of £17.00 per copy.

This book could fulfil a distinct need—the individual sections could be published as separate entities—or at least in groups of related topics. This would enable one to have access to critical reviews in one's own field of interest, and with the yearly updating lead to a much needed reduction in "literature research" time.

GW PENNINGTON

Brain Biopsy. The Smear Technique for Neurosurgical Biopsies. J Hume Adams, DI Graham and D Doyle. (Pp 124; illustrated; £15.) Chapman & Hall Ltd. 1981.

The smear technique is important in neurosurgical biopsies and this book is the only detailed authoritative work on the technique currently available. It is based on the extensive experience of the three neuropathologists of the Glasgow Institute of Neurological Sciences where it has been in use for the past 20 years.

The text, though brief, is generally adequate and is concise but not didactic. The pros and cons of the smear technique v frozen sections are discussed and a convincing case made in favour of smears in all but a few diagnostic situations. The sections on artefacts and diagnostic pitfalls are useful and the approach practical throughout.

Black and white photographs of smears and related paraffin sections take up over two thirds of the book. All those who have attempted to photograph smear preparations will know how difficult it is to get good results and it is therefore not surprising that some of the illustrations, especially at low magnification, lack definition and fail to display their point clearly. Nevertheless the book is a valuable aid and will prove especially helpful to those coming to the technique for the first time.

DB BROWNE