Letters to the Editor

Histological criteria for childhood coeliac disease

I am writing to confirm the findings by Dr MN Marsh on high mitotic indices\(^1\) in small intestinal mucosal biopsy of patients with gluten-sensitive enteropathy.

I would like to emphasise that in our series a high mitotic index has been one of the most useful pointers in differentiating coeliac disease from other causes of "flat mucosa," including that of cow's milk intolerance. The three important morphological criteria used by us in childhood coeliac disease are as follows: (a) a flat mucosa with elongated crypts (the latter is absent in most cases of cow's milk intolerance), giving the mucosa an appearance of a normal or occasionally increased thickness (>550 μm); (b) infiltration of the surface enterocytes by an increased number of lymphocytes (emperipolysis) and a mitotic index of the lymphocytes of greater than 0.3%; (c) abnormal fat absorption pattern, characterised by accumulation of fat blobs in the supranuclear spaces of the surface enterocytes, which is easily detected by any special fat stain.

F RAAFAT
Queen Elizabeth Hospital for Children,
Hackney Road,
London E2 8PS

Reference


The in vitro responses of Bacteroides fragilis to Moxalactam, Cefotaxime, Cefmetazole, Josamycin and erythromycin

Although the sensitivity of Bacteroides fragilis to Moxalactam, Cefotaxime, Cef-

metazole, Josamycin and erythromycin has been described little has been reported about the bactericidal effect of these antibiotics against this organism. Such an effect may be of considerable importance when the treatment of highly susceptible patients—such as the immunosuppressed—is being considered. Furthermore, little is known about the in vitro and in vivo acquisition of resistance of B fragilis to these drugs. The results of our observations may, therefore, be of interest.

We have studied the susceptibility of two clinically isolated strains of B fragilis ss fragilis (strains A and B) and one of B fragilis ss vulgatus (strain C) to Moxalactam, Cefotaxime, Cefmetazole, Josamycin and erythromycin. Tubes of brucella-enriched broth medium containing serial dilutions of the various antimicrobial drugs were inoculated with approximately 10\(^7\) CFU/ml of the strains under test. Anaerobic incubation at 35°C was carried out for 24 h. Subcultures were made using a standard loop, to blood agar. The minimum inhibitory concentration (MIC) was defined as the minimum antibiotic concentration preventing bacterial growth detectable by the naked eye after 24 h incubation. The minimum bactericidal concentration (MBC) was arbitrarily defined as the minimum concentration of the drug producing a 99.9% reduction of the inoculum.

The MIC and MBC values for Moxalactam, Cefotaxime, Cefmetazole, Josamycin and erythromycin against the three strains of Bacteroides tested are shown in the Table. Cefotaxime showed poor activity against the three strains when compared with the other four drugs. Moxalactam, Cefotaxime and Cefmetazole were bactericidal at concentrations equal to or only slightly higher than their inhibitory values. Although sterilisation of the cultures was not achieved—even with concentrations 30–500 times higher than the particular MIC—the average reduction was from 10\(^7\) CFU/ml to 10\(^5\) CFU/ml. The effect of Josamycin and erythromycin was entirely bacteriostatic failing to reduce the initial inoculum at concentrations 30–100 times higher than their MICs.

Resistance to the antibiotics studied was not induced in the Bacteroides strains following a single exposure at concentrations below, equal to, or above the MICs. Resistance following a single exposure, although uncommon, has been shown to occur with clindamycin\(^1\) and in Bacteroides isolated from faeces of patients receiving this drug.

In summary, considerable bactericidal activity against B fragilis has been demonstrated by Moxalactam, Cefotaxime and Cefmetazole although each drug produced "persisters"; these are defined as (bacterial) cells which survive exposure to ostensibly lethal concentrations of bactericidal antibiotics but whose progeny remain fully sensitive to the drug.\(^3\) B fragilis organisms demonstrating such phenotype resistance may play an important part in

Technical method

Requests for reprints to: Dr GWH Stamp, Department of Pathology, University of Liverpool, Duncan Building, Royal Liverpool Hospital, Prescot Street, Merseyside L69 3BX, England.

<table>
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<tr>
<th></th>
<th>Moxalactam</th>
<th>Cefotaxime</th>
<th>Cefmetazole</th>
<th>Josamycin</th>
<th>Erythromycin</th>
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<td>2</td>
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<td>64</td>
<td>256</td>
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<tr>
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<td>2</td>
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<td>256</td>
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<td>B fragilis C</td>
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<td>4</td>
<td>32</td>
<td>512</td>
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</table>

Minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) of five antimicrobials against Bacteroides fragilis (mg/l)

Letters to the Editor

recurrent infection. The strains of Bacteroides tested also showed considerable susceptibility to josamycin and erythromycin; however, these drugs excited a bacteriostatic effect only—a feature which might be important when treatment of immunosuppressed patients is being considered. Finally, although resistance arising after a single exposure to an antimicrobial agent is very uncommon, this has been observed with clindamycin—a phenomenon that merits further investigation.

The relevance of these in vitro findings for the treatment of B fragilis infections in immunosuppressed patients requires further investigation.

FRANCISCO SORIANO
MC PONTE
MC GASPAR
Departamento de Microbiologica,
Faculdade de Medicina,
Avenida de Reies Cátolicos 2,
Madrid 3, Spain

References


Accuracy of morphological diagnosis of lung cancer in a department of respiratory medicine

In a recent paper we suggested methods for improving the quality of specimens taken at fiberoptic bronchoscopy. We now report two techniques which have resulted in an increased yield of malignant cells and tumour tissue.

Withdrawal of the cytology brush through the specimen channel of the bronchoscope may deposit tumour cells on the side of the channel and secretions aspirated from around a tumour may be retained in the channel and thus not be obtained for cytology. In a series of 50 patients with primary bronchial carcinoma we examined an additional specimen, the material obtained on cleaning the bronchoscope channel. This resulted in an 88% yield of malignant cells compared with a 78% yield when brushings and aspirates only were examined.

The yield of malignant tissue from bronchial biopsies in our original series was poor (53%) and specimens were usually taken with the “standard” Olympus biopsy forceps. The use of Olympus forceps with alligator (toothed) jaws with their better “bite” has improved the overall yield to 71% and in patients with irreversible evidence of endobronchial tumour, a yield of 86% has been obtained.

MARTIN D CLEE
HELEN LD DUGUID*
Department of Respiratory Medicine,
King’s Cross Hospital, Dundee.

* Cytology Unit, Department of Pathology,
Royal Infirmary, Dundee.

Book reviews


This attractively produced and reasonably priced volume is based on the extensive experiences of two experts working at the Institute of Laryngology and Otology of the University of London. The book is divided into 24 chapters covering Granulomatous Diseases (9) and the bulk of the volume (14) covering Neoplasms. An opening chapter provides a useful description of the normal histology of the region. Though giving extensive coverage many of the chosen subjects are rare and even esoteric. Each chapter is written with a common format combined with a historical introduction including aetiology and pathogenesis, which to the reviewer should be at the beginning and not towards the end of the chapters. The gross appearances of the lesion is briefly described with the main emphasis on histology. Each chapter is extensively illustrated including many electron micrographs with very adequate historic and recent references.

Surprisingly Nasal Polyposis is grouped with rare miscellaneous granulomas including Eosinophilic Granulomas and the exceptionally rare Myosphenulosis, which appears to be collections of red cells contained within petroleum based ointment “bags.” As expected the majority (90%) of up to 600–700 polyps seen in one year were allergic. Though now very rare Tuberculosis merits a short chapter as does Sarcoïdosis, though in the latter there is an over-emphasis on the possible infective nature of the disease. Leprosy, Syphilis and Yaws are included. Rhinosporidiosis and Rhinoscleroma also perhaps surprisingly merit a whole chapter, though rarely going to be met by hospital pathologists. Other mycotic and parasitic infections are adequately covered. The chapter on midfacial granuloma syndrome was read with interest as being a speciality of the senior author who concludes that the condition is inflammatory and not neoplastic, though no consistent single organism has been isolated. They distinguished Wegener’s granuloma by the presence of vasculitis and involvement of other organs.

The extensive coverage of tumours is preceded by the authors’ own classification which is broadly in line with the 1978 WHO publication. In the description of papillomas the term “transitional type” obviates confusion with the non-existent transitional cell though the term “transitional cell carcinomas” is still used—perhaps “basiloid” would be a better term. Overclassification is often apparent as tumours of mucous glands are subdivided into nine histological types, though 60% are considered malignant. Again in the tumour section rare and very rare lesions are described at length for example malignant fibrohistiocytoma. There is a useful account of fibrous dysplasia and the distinction between giant cell reparative granuloma and giant cell tumour.

Despite the above comment this volume is a useful reference book for general histopathologists and a “must” for specialists, pathologists and surgeons in the field.

W JONES WILLIAMS


An attempt to bring together the practical and scientific aspects of radioimmunoassay for antibody is successfully achieved in this book. The first chapters explain in commendable detail the concept behind such assays and provide a practical guidance for the worker with no experience in this field. Detailed recipes are provided which are backed up by useful bibliographies. The second part of the book reviews in detail...
The in vitro responses of Bacteroides fragilis to Moxalactam, Cefotaxime, Cefmetazole, Josamycin and erythromycin.

F Soriano, M C Ponte and M C Gaspar

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