PostScript

LETTERS TO THE EDITOR

Isolated endogenous endophthalmitis secondary to *Nocardia* spp in an immunocompetent adult

Nocardia spp cause opportunist pulmonary, cerebral or soft-tissue infections and exogenous endophthalmitis. Endogenous endophthalmitis is rare, occurring as the result of haematogenous dissemination, and in association with underlying immunodeficiency. We present the case of a patient with endogenous nocardial endophthalmitis, diagnosed by histopathological characteristics on subretinal biopsy, in an immunocompetent host with no evidence of extraocular infection.

A 49-year-old man presented with a 9-day history of worsening vision and ophthalmic pain. A left-sided choroidal mass was visualised on funduscopy. The patient refused admission and returned 3 days later with retinal detachment and no perception of light in his left eye. No history of ocular trauma or surgery was seen. He had injected intravenous drugs 6 years ago, but was taking no regular drugs.

Investigations included an unremarkable blood film, immunoglobulins and complement, and negative HIV antibody. Hepatitis C antibody and RNA were positive. No other foci were found on chest x ray, echocardiogram or abdominal ultrasound. A computed tomography scan showed left-sided proptosis and preseptal periorbital soft-tissue swelling, with extension through the posterior margin of the globe.

Microscopy of the vitreal fluid showed a few leucocytes, but culture showed no growth. A subretinal fine-needle aspiration was carried out; haematoxylin and eosin staining showed a purulent aspirate containing proteinaceous material admixed with apoptotic and viable neutrophils. No granulomatous inflammation was identified. Grocott stain showed distinctive colonies (fig 1) of non-mycelial, beaded, filamentous organisms, branching at about 90°. They tested weakly Gram positive, weakly acid fast, positive on Wade-Fite stain and negative for periodic acid-Schiff. In the context of the distinct morphology and tinctorial stain characteristics, features were those of *Nocardia* spp. Prolonged culture showed no growth.

Intravenous trimethoprim-sulphamethoxazole was started, but the patient absconded after 3 days and could not be located. He presented again after 4 months, with resolution of systemic symptoms and ophthalmic pain. Visual acuity was unchanged. A

computed tomography scan showed reduction in size of the left globe and resolution of preseptal soft-tissue swelling. It was decided not to start antibiotics again. No evidence of recurrence is seen in 6 months.

Nocardial endophthalmitis usually occurs after ocular trauma or surgery.¹ Endogenous endophthalmitis, although rare, is associated with haematogenous dissemination from pulmonary or cerebral foci, and occurs in patients with underlying malignancy, HIV infection, immunosuppressive chemotherapy or prolonged corticosteroid treatment.²⁻³ Only one case was previously reported of endogenous nocardial endophthalmitis, without extraocular infection, in an immunocompetent patient.⁴ A potentially immunosuppressive role, however, of hepatitis C infection is a matter for speculation.

Nocardia spp have distinctive histopathological features, such as beading, branching at 90°, absent sulphur granules, weak acid-fast nature and positive Wade-Fite stain, which differentiate them from *Actinomyces* spp. Although *Nocardia* spp have been isolated from vitreal samples, the role of subretinal biopsy in establishing an early diagnosis has been highlighted.²⁻³ This should be considered promptly in worsening endophthalmitis of unknown aetiology.

Finally, the outcome of this case despite minimal antibiotics is a point for discussion. Owing to the typical chronic course of infection, 6-12 months of trimethoprim-sulphamethoxazole is recommended.⁵ Previous reports describe a poor prognosis with ocular nocardial infection, which often resulted in enucleation and death from extraocular foci.²⁻³ Earlier reports have suggested that the mortality for localised pulmonary nocardiosis in previously healthy patients may be lower.⁴ Our findings may support a similar pattern in localised ocular infection.

T de Silva, C Evans

Department of Infection and Tropical Medicine, Royal Hallamshire Hospital, Sheffield, UK

H S Mudhar

Department of Histopathology, Royal Hallamshire Hospital, Sheffield, UK

I Rennie

Department of Ophthalmology, Royal Hallamshire Hospital, Sheffield, UK

S T Green

Department of Infection and Tropical Medicine, Royal Hallamshire Hospital, Sheffield, UK

Correspondence to: T de Silva, Department of Infection and Tropical Medicine, E floor, Royal Hallamshire Hospital, Glossop Road, Sheffield S10 2JF, UK; thushan.desilva@sth.nhs.uk

doi: 10.1136/jcp.2005.036343

Competing interests: None.

References

- 1 Hudson JD, Danis RP, Chaluvadi U, *et al*. Post-traumatic exogenous *Nocardia* endophthalmitis. *Am J Ophthalmol* 2003;135:915-17.
- 2 Ishibashi Y, Watanabe R, Homma S, *et al*. Endogenous *Nocardia asteroides* endophthalmitis in a patient with systemic lupus erythematosus. *Br J Ophthalmol* 1990;74:433-6.
- 3 Ng EW, Zimmer-Galler IE, Green WR. Endogenous *Nocardia asteroides* endophthalmitis. *Arch Ophthalmol* 2002;120:210-13.
- 4 Presant CA, Wiernik PH, Serpick AA. Factors affecting survival in nocardiosis. *Am Rev Respir Dis* 1973;108:1444-8.
- 5 Meyer SL, Font RL, Shaver RP. Intraocular nocardiosis: report of three cases. *Arch Ophthalmol* 1970;86:666-9.

Splenic marginal zone lymphoma with predominant red pulp involvement lacking p53 overexpression

Splenic marginal zone lymphoma (SMZL) is defined in the World Health Organization (WHO) classification as a B cell lymphoma

Figure 1 Distinctive colonies on Grocott stain.

Figure 1 Photomicrography of bone marrow shows nodular and interstitial lymphoid infiltrates (A) with intravascular pattern highlighted by anti-CD20 immunohistochemical staining (B).

comprising small lymphocytes that surround and replace the splenic white pulp and merge with a peripheral (marginal) zone of larger cells, leading to a biphasic zonal pattern. The tumour involves the spleen, splenic hilar lymph node, bone marrow and often, peripheral blood. Recently, Mollejo *et al*¹ proposed a putative diffuse variant of SMZL with predominantly red-pulp involvement, absence of follicular replacement and a monomorphous population of tumour cells resembling marginal zone B cells, with scattered nucleolated blast cells. They found high p53 expression in all four patients, with p53 gene mutation in two.

Here, we report a case similar to that reported by Mollejo *et al*, without p53 over-expression. A 34-year-old woman presented with progressive abdomen distension and a body weight loss of 3–4 kg without fever or any systemic disease. Physical examination showed a huge spleen without lymphadenopathy. Haemogram showed haemoglobin at 8.3 mg/dl, white cell count at $12.1 \times 10^3/\mu\text{l}$ with 74% lymphocytes devoid of cytoplasmic protrusions and platelets at $103 \times 10^3/\mu\text{l}$. Biochemical tests were normal, except for mildly raised levels of lactate dehydrogenase. The patient's serum was positive for hepatitis B antigen and negative for anti-HIV and anti-hepatitis C virus. A computed tomography scan of the abdomen showed diffuse and homogeneous enlargement of the spleen, without lymphadenopathy or any lesion in other abdominal organs.

Marrow aspiration showed 42% atypical lymphocytes. Marrow trephine showed 80% cellularity with small lymphocytic infiltration in interstitial and nodular patterns (fig 1A). These lymphocytes exhibited small angulated nuclei mixed with occasional medium-sized cells. Immunohistochemically, they expressed CD20, bcl-2, immunoglobulin (Ig) D, IgM and p27, but not CD3, CD5, CD20, CD23, CD43, bcl-6 and cyclin D1. The CD20 staining highlighted the intravascular infiltration pattern (fig 1B). Flow cytometric immunophenotyping showed CD19+/CD20+/CD22+/CD45+(strong)/CD79a with monotypic surface λ light chain and aberrant CD13 expression. CD5, CD10, CD34 or terminal deoxynucleotidyl transferase was negative. The patient underwent splenectomy (under the impression of SMZL with thrombocytopenia). The spleen measured $25 \times 18 \times 10$ cm and weighed 2105 g with homogeneous "beefy" cut surface devoid of any nodules or blood lakes. Microscopic examination showed markedly expanded red pulps with small atypical lymphocytic infiltration associated with the cords (fig 2). The white pulps were small, without biphasic growth pattern. The neoplastic cells shared the same immunophenotype as the marrow biopsy specimen. In addition, they expressed IgD, IgM, CD27 and p27, but not p21. Staining for p53 was essentially negative except in scattered large cells. λ Light chain-expressing tumour cells invaded predominantly in the red pulp, but also in the white pulp, with a blurring of the zonal pattern into the follicular centres. The woman's platelet and white cell counts became normal in 2 and 5 weeks after splenectomy, respectively, without chemotherapy. She has been free of disease for 5 months.

Intravascular pattern of marrow involvement is common and prominent in SMZL. It was first claimed to be specific for SMZL but was later shown to be present in a few subtypes of lymphoma.^{2,3} The association of an intravascular infiltrate and lymphoid follicles in marrow trephine favoured a diagnosis of

Figure 2 Photomicrography of spleen shows markedly expanded red pulps with indistinct white pulps (A) and a residual follicle at the right lower corner under higher power (B). The lymphoma cells are monotypic for λ light chain with invasion into the residual follicle at the right upper corner (C, κ ; D, λ). In addition, they express CD27 (E), but not p53 (F), except occasional blasts.

SMZL.^{4,5} With the immunophenotype, intravascular pattern in marrow and predominant red-pulp involvement, our case is similar to that described by Mollejo *et al*¹ and supports their newly proposed entity of diffuse variant of SPZL. However, our case is different from theirs in the expressing p27 but not p53.

S-S Chuang

Department of Pathology, Chi-Mei Medical Centre, Tainan; Taipei Medical University, Taipei, Taiwan

C-F Li

Department of Pathology, Chi-Mei Medical Centre, Tainan, Taiwan

D Lu

Department of Pathology, Liou-ying Chi-Mei Hospital, Tainan, Taiwan

T-C Tsai

Department of Surgery, Liou-ying Chi-Mei Hospital, Tainan, Taiwan

C-J Tsao

Department of Internal Medicine, Liou-ying Chi-Mei Hospital, Tainan, Taiwan

Correspondence to: S-S Chuang, Department of Pathology, Chi-Mei Medical Center, 901 Chung-Hwa Road, Yung-Kang City, Tainan County 710, Taiwan; cmh5301@mail.chimei.org.tw

doi: 10.1136/jcp.2006.037218

Competing interests: None declared.

References

- Mollejo M, Algara P, Mateo MS, *et al*. Splenic small B-cell lymphoma with predominant red pulp involvement: a diffuse variant of splenic marginal zone lymphoma? *Histopathology* 2002;**40**:22–30.
- Labouyrie E, Marit G, Vial JP, *et al*. Intrasinusoidal bone marrow involvement by splenic lymphoma with villous lymphocytes: a helpful immunohistologic feature. *Mod Pathol* 1997;**10**:1015–20.

- 3 Costes V, Duchayne E, Taib J, *et al.* Intrasinusoidal bone marrow infiltration: a common growth pattern for different lymphoma subtypes. *Br J Haematol* 2002;**119**:916–22.
- 4 Kent SA, Variakojis D, Peterson LC. Comparative study of marginal zone lymphoma involving bone marrow. *Am J Clin Pathol* 2002;**117**:698–708.
- 5 Audouin J, Le Tourneau A, Molina T, *et al.* Patterns of bone marrow involvement in 58 patients presenting primary splenic marginal zone lymphoma with or without circulating villous lymphocytes. *Br J Haematol* 2003;**122**:404–12.

BOOK REVIEW

Molecular approaches to malaria

Edited by I W Sherman. Washington DC: ASM Press, 2005, pp 542. ISBN 155581 330 5

In a world where most up-to-date information can be gained easily and cheaply by a PubMed search for the most appropriate review article on any subject, the role of the textbook increasingly appears redundant. Books such as *Molecular approaches to malaria*, however, reaffirm the value of a good textbook.

Malaria continues to be one of the most important causes of death and illness worldwide. There are about half a billion cases of malaria and around two million deaths occur annually, mostly in children in sub-Saharan Africa. Despite having effective treatment for malaria (quinine) for over 300 years and a knowledge of the biology of the causative agent for over a hundred years, the number of deaths from malaria continue to rise. Large investments have been made in malaria research during the past two decades. Consequently, the disciplines of cell and molecular biology of *Plasmodium falciparum* have expanded dramatically, with, for example, the sequencing of the *P falciparum* genome, novel insights into metabolism and also the molecular basis of drug resistance.

The recent development of fosmidomycin, a new malaria drug, gives an excellent example of how understanding the apparently obscure topic of apicoplast metabolism can lead to the identification of a new class of drugs that are now in clinical development. This new knowledge of the biology of malaria along with rapidly expanding knowledge of gene expression and proteomics will continue to provide valuable insights into the pathogenesis of malaria and further treatments for this disease. *Molecular approaches to malaria* brings together all these topics in one clear and comprehensive textbook.

There is also the fascination of the biology of an organism with many stages, which is perfectly adapted to live in both vertebrate and invertebrate hosts in different stages of its complex life cycle. This book is not intended for a casual non-specialised readership, but should prove invaluable to anyone working in the field of malaria or with a special interest in this intriguing and important disease.

This book is structured into six sections with 27 chapters. These chapters cover a broad range of topics from cell biology to metabolism and immune evasion. There are also useful chapters on the use of internet resources for malaria research and techniques for genetic manipulation of *P falciparum*.

As with any multi-authored textbook, the chapters are of variable quality, but on the whole the writing is first class, albeit dense. The chapters are written by the appropriate world experts, complete with up-to-date references (many from 2005). The editing is excellent, with little overlap between chapters, coherent style and clear indexing. My only (small) gripe is that all the colour plates are in one section, which means switching pages often. This is a comprehensive text book that is authoritative and easy to read, and I look forward to putting my copy to good use in the future.

T Planche

CALENDAR OF EVENTS

Combined adult and congenital cardiovascular pathology course

29 November–1 December 2006, Royal Brompton & Harefield NHS Trust, London, UK.

This “hands-on” course approaches in detail the problems that face the diagnostic pathologist when dealing with cardiovascular pathology, both congenital and adult. The approach to a cardiac autopsy and sudden death will be emphasised. Cardiac specimens will be made available for analysis and there will also be video demonstrations. A slide seminar with slides is included. The course is aimed at trainees studying for the MRC PATH, and also at senior pathologists who wish to update their knowledge. The course fee is £400 (including coffee, tea and lunch). There is a special fee of £300 for junior doctors in training.

Further details: Short Course Office, National Heart and Lung Institute, Dovehouse Street, London SW3 6LY, UK; Tel: +44 (0)20 7351 8172; Fax: +44 (0)20 7351 8246; Email: shortcourse.nhli@ic.ac.uk

CORRECTION

doi: 10.1136/jcp.2004.019323.corr1

There was an error in reference 9 of the article by Chatterjee JS, Youssef AHK, Brown RM, *et al.* Congenital nodular multiple glomangioma: a case report. *J Clin Pathol* 2005;**58**:102–10. The correct reference should be as follows: Öztekin HH. Popliteal glomangioma mimicking Baker's cyst in a 9-year-old child: an unusual location of a glomus tumor. *Arthroscopy* 2003;**19**:e67–e71.