

PostScript

CORRESPONDENCE

If you have a burning desire to respond to a paper published in *Journal of Clinical Pathology*, why not make use of our "rapid response" option?

Log on to our website (www.jclinpath.com), find the paper that interests you, and send your response via email by clicking on the "eLetters" option in the box at the top right hand corner.

Providing it isn't libellous or obscene, it will be posted within seven days. You can retrieve it by clicking on "read eLetters" on our homepage.

The editors will decide as before whether to also publish it in a future paper issue.

Accuracy and completeness of the documentation of blood culture results

Heard and colleagues¹ raise the thorny issue of how important microbiological results and advice should be recorded in patients' notes and by whom. Reported here is a prospective audit identifying how accurately this is done. It was decided that the audit should concentrate on blood cultures yielding a clinically significant isolate, a finding that all members of staff should consider as important and worthy of prompt documentation.

This work was performed in a 1045 bed hospital where all Gram stain and culture results from clinically significant blood cultures are telephoned by a medical microbiologist to either the attending doctor or to qualified nursing staff on the ward. It is expected that the information and advice given over the telephone should be promptly documented in the patient's notes and that nursing staff would contact the patient's attending doctor. Where it is clear from nursing staff that the patient is still septic, not responding to empirical treatment, on inappropriate treatment, or when some other medical action is necessary, the attending doctor is contacted directly. Because of time constraints personal visits to the ward are the exception rather than the rule. In a minority of cases culture results are imparted to attending doctors face to face. Of the 61 blood cultures reviewed, four were ultimately considered as contaminants. The microbiology departmental clinical database was used to identify what information was imparted, to whom, and whether this occurred on a weekday or at the weekend. The patient's notes were scrutinised more than 24 hours after contact was made. The required minimum entry in the notes was correct Gram or culture result. The accuracy of this and any other recorded information was noted. It was felt that if simple microbiological information concerning clinically significant pathogenic infections was not being documented then more complex clinical information was unlikely to have been recorded any more faithfully.

Of the 61 episodes reviewed, 16 (26%) were not recorded in the patient's notes at all. One hundred and eleven individual contacts were made and 71 (64%) of these contacts were recorded in the patient's notes. Not all of the 61 episodes necessarily had two contacts made, on 11 occasions the microbiologist wrote directly in the notes. It was of note that 60 of the 76 calls to doctors were documented in the patient record, whereas only 10 of the 34 calls to nurses were documented. There were marginally fewer documented calls at weekends (56% v 67% during weekdays) but this was largely because more weekend calls were made to nurses. In one instance it was unclear to who the telephone call was made to.

The number of contacts documented is similar to previous studies that have looked at the accuracy of both telephone and face to face contacts. In similar studies 83% and 79% of clinically significant blood cultures had at least one entry in the patient's notes.^{2,3} There seemed to be little difference if the result was reported over the telephone or face to face.³ An audit looking at day one results only reported a documentation rate of 54% but contaminated blood cultures, which may be less likely to be documented, were also considered.⁴

This audit shows that advice given by microbiologists to other members of staff is recorded in the notes on fewer than two thirds of occasions, although where recorded it is generally accurate. The finding that over one quarter of clinically significant bacteraemias where not noted at all is troubling. This audit was not designed to measure whether these omissions led to adverse outcomes, although one might expect this to be the case on occasion. At Derriford Hospital, computerised reports of all culture positive are issued. There is generally a lag of at least 48 hours between initial culture and the issue of the report and probably a further delay before the attending doctor looks at the report. In many cases, this leaves a window when the patient's condition is at its most critical and where important microbiological advice is not readily available. These data support the need for microbiologists to review all clinically significant bacteraemias and write in the patient notes. With all the other calls on the time of microbiologists, few departments can provide such a service. Without innovations such as electronic patient records or real increases in the numbers of medical microbiologists, the laudable advice of Heard and colleagues that "microbiologists should make relevant notes in patients' records" is unlikely to be a realistic option in many hospitals in the UK.¹

J R Greig

Derriford Hospital, Derriford Road, Plymouth, Devon PL6 8DH, UK

References

- 1 Heard SR, Roberts C, Furrows SJ, *et al*. Corridor consultations and the medical microbiology record: is patient safety at risk? *J Clin Pathol* 2003;56:43-7.
- 2 Arbo MDJ, Snyderman DR. Influence of blood culture results on antibiotic choice in the treatment of bacteraemia. *Arch Intern Med* 1994;154:2641-5.
- 3 Howe RA, Bates CJ, Cowling P, *et al*. Documentation of blood culture results. *J Clin Pathol* 1995;48:667-9.

4 Cooke FJ, Richards DB, Breathnach A.

Documentation of positive blood culture results in a London teaching hospital. *J Infect* 2001;43:1-2.

Pelvic sarcoma arising from chronic osteomyelitis

Gulmann *et al* reported on a case of chronic osteomyelitis presenting as a mass of the chest mimicking a soft tissue sarcoma.¹ The authors suggested that, although chronic osteomyelitis is a known cause of confusion with bone tumours, a definitive diagnosis is feasible by specific immunohistochemical staining.

However, the potential risk of transformation of chronic osteomyelitis into a malignant lesion is an unforgettable point both for the clinician and the pathologist.² Two years ago, we encountered a patient developing a rapidly aggressive sarcoma with an uncommon onset. He was a 23 year old man, with a 16 month history of chronic osteomyelitis of the left hip bone, referred to the urological department. Three years before, he had been involved in a road accident with a bilateral fracture of the thigh bone and left acetabulum. On admission to the ward the patient reported fever, dysuria, and suprapubic pain. Physical examination demonstrated an osteocutaneous fistula with foul smelling drainage on the lateral aspect of the left hip bone. On standard computed tomography a haemorrhagic mass causing bladder impression and connected with the fistula was found. A surgical exploration was performed with drainage of the septic tissue, and a 5 cm pelvic lymph node was excised from the left iliac chain for histological examination. Light microscopy showed a solid proliferation of spindle shaped cells, with a high mitotic index, associated with lymphatic aggregates and foci of necrotic tissue. Staining for S-100 protein, desmin, vimentin, and focal smooth actin was positive. The histological and immunohistochemical features of the pelvic node confirmed an undifferentiated sarcoma. The patient died three months postoperatively. Malignant lesions are rare complications of chronic osteomyelitis. As reported in a large series by McGroarty *et al*,³ squamous cell carcinoma is by far the most common type of associated malignant disease, whereas sarcoma has been reported only rarely.⁴ The latency period between the onset of osteomyelitis and the development of neoplasia may be as short as one year, or it may be decades. In general, the neoplasia occurs in the osteomyelitic sinus or in a chronic draining fistula. The most frequent clinical findings of malignancy in chronic fistulating osteomyelitis are persistent foul discharge, pain, and bleeding.³ In this case, the osteocutaneous fistula was connected to the left iliac area where the sarcoma arose and spread to pelvic lymph nodes. In conclusion, even though chronic osteomyelitis may be a cause of difficult differential diagnosis with bone tumours, we would emphasise the need to maintain a high index of suspicion in a case of chronic osteomyelitis with an unusual presentation.

F Campodonico

SC Urologia, Ospedale Galliera, 16128 Genova, Italy; fabio.campodonico@galliera.it

G CarmignaniDepartment of Urology, University of Genoa,
Genoa, Italy**References**

- 1 **Gulmann C**, Young O, Tolan *et al*. Chronic osteomyelitis mimicking sarcoma. *J Clin Pathol* 2003;**56**:237-9.
- 2 **Slominski A**, Wortsman J, Carlson A, *et al*. Molecular pathology of soft tissue and bone tumours. A review. *Arch Pathol Lab Med* 1999;**123**:1246-59.
- 3 **McGrory JE**, Pritchard DJ, Unni KK, *et al*. Malignant lesions arising in chronic osteomyelitis. *Clin Orthop* 1999;**362**:181-9.
- 4 **Akbarnia BA**, Wirth CR, Colman N. Fibrosarcoma arising from chronic osteomyelitis. Case report and review of the literature. *J Bone Joint Surg Am* 1976;**58**:123-5.

Prepubertal testicular tumours in Kashmir: a histopathological report of 15 cases

Prepubertal testicular tumours are very rare and occur at an incidence of 0.5-2/100 000 children.^{1,2} Of all the paediatric malignancies they rank seventh in frequency and represent only 1% of all paediatric solid tumours.³

We conducted a study to see the pattern of prepubertal testicular tumours in Kashmir. The material for our study was obtained from the files of the histopathology section of the department of pathology, Government Medical College, Srinagar, Kashmir, India. The records of all prepubertal testicular tumours reported from January 1984 to December 1998 were studied. Routine and special stains were applied on fresh sections from paraffin wax embedded blocks wherever required. Fifteen prepubertal testicular and paratesticular tumours were recorded in the 15 year period of our study. Germ cell tumours predominated: there were 12 germ cell tumours and only three non-germ cell tumours. There were 10 yolk sac tumours, two teratomas (mature), two rhabdomyosarcomas (paratesticular), and one non-Hodgkin's lymphoma-Burkitt's lymphoma. The youngest patient was 10 months old and the oldest was 14 years old. Ten patients presented at or below the age of 4 years. The youngest patient (10 months of age) had a yolk sac tumour and the oldest (14 years old) had rhabdomyosarcoma. In two patients both testes were involved, with one of these two patients having bilateral undescended testes. Prepubertal testicular tumours most commonly occur within the first 4 years of life.⁴ Although the cut off age for our analysis was 14 years, most patients presented at or below the age of 4 years. Most of the germ cell tumours were yolk sac tumours (10 of 12), followed by teratoma (two of 12). Mostofi recorded 15 cases of yolk sac tumour (embryonal cell carcinoma) in a total of 22 cases and seven cases of teratoma.⁵

Yolk sac tumour is widely accepted today as the most common prepubertal germ cell tumour.^{1,3} Rhabdomyosarcoma was the second most common tumour recorded in our series. It is the most common mesenchymal malignancy of paratesticular tissue in the prepubertal age group.³ We found one case of Burkitt's lymphoma in a 5 year old child involving both the testes. Although rare, cases of Burkitt's lymphoma involving the testis have been reported in the literature.⁵

N D Chowdhary, S BesinaDepartment of Pathology, Government Medical
College, Srinagar 190010, Kashmir, India**S M Kadri**Department of Microbiology, Government Medical
College, Srinagar; kadrism@sancharnet.in**N Jan**Mubarik Nursing Home, Abi-Guzar, Srinagar,
Kashmir, India**Q A Chowdhary**School of Medicine, Government Medical College,
Srinagar**M A Laharwal**Department of Pathology, Government Medical
College, Srinagar**References**

- 1 **Brosnan SA**. Testicular tumours in prepubertal children. *Urology* 1979;**13**:581.
- 2 **Kaplan GW**, Cromie WJ, Kelalis PP, *et al*. Prepubertal yolk sac testicular tumours: report of testicular tumour registry. *J Urol* 1988;**140**:1109.
- 3 **Kay R**. Prepubertal testicular tumour registry. *J Urol* 1993;**150**:671-4.
- 4 **Abell MR**, Holtz F. Testicular neoplasm in infants and children. *Cancer* 1963;**16**:965-71.
- 5 **Mostofi FK**. Infantile testicular tumours. *Bull N Y Acad Med* 1952;**28**:684-7.

Reduced bone formation in UK Gulf War veterans: a bone histomorphometric study

We read the paper by Compston *et al* on bone loss in Gulf veterans¹ with concern and interest. However, if taken to represent the problems of unwell Gulf veterans it is open to serious misinterpretation because of problems in design, factual accuracy, and certain conjectures.

The 17 cases are potential litigants who are highly unlikely to be representative of the Gulf veteran population. Apart from very brief sociodemographic details, smoking and alcohol consumption histories, no clinical information is given about the indications for bone biopsy except that 16 complained of unspecified arthralgia and other musculoskeletal symptoms. The 13 controls were taken from a study, reported 20 years ago, involving bone biopsies on civilians undergoing minor surgery and are thus not a comparable group. Furthermore, investigators were not blind to case/control status, allowing for observer bias. Therefore, no general conclusions about Gulf veterans' morbidity can be inferred from this work.

The findings of reduced bone formation are said to be heterogeneous but bone histology was normal in six cases. No clinical histories suggesting bone disorder are reported and the presence of osteoporosis is denied. We agree that the clinical relevance of these findings is unclear, but would point out that bone loss occurs in several conditions in which reduced activity is a feature, including depressive illnesses and other multisymptom disorders,^{2,3} which are not uncommon in Gulf veterans.⁴ Exclusion of these and other conditions associated with bone loss are necessary steps before these findings are associated with service in the Gulf.

The attribution of these findings to possible exposures in the Gulf deserves comment. Lifestyle changes are briefly discussed but no other possible clinical explanations are offered. Instead, the authors point to associations with very dubious exposures to organophosphate (OP), compounds such as pesticides and sarin. What exactly was the basis of the statement of obvious OP pesticide spraying and why was it accepted so uncritically? Sarin is an odourless, colourless vapour

whose detection on military operations is only possible by either patients experiencing symptoms or special detection equipment. There was no confirmed offensive use during the Gulf conflict or subsequently. Given the toxicity of sarin and the fact that no deaths from or cases of OP poisoning were seen during the Gulf conflict the uncritical acceptance of a statement of awareness of sarin exposure is irresponsible. To claim similarities with findings in agricultural workers with chronic OP exposure from sheep dipping is equally unjustified because any possible exposure histories would be quite dissimilar, usually involving several years of exposure. Immunisation history is a red herring. A search of MEDLINE reveals no evidence to connect osteoporotic conditions with immunisations. It is true that the reversible anticholinesterase pyridostigmine was used as a nerve agent pretreatment but doses were small. If this was a factor in the bone changes found would one not expect to see a similar picture in patients with myasthenia gravis? Clearly, there are many alternative explanations for the reported findings, which may of course have no clinical relevance at all.

(The authors are all employed by the Ministry of Defence. The views expressed here are their own and do not represent those of the Ministry of Defence.)

N F W Blatchley, H A Lee, J P G BoltonThe Baird Health Centre, Gassiot House,
St Thomas's Hospital, Lambeth Palace Road,
London SE1 7EH, UK;
map@gstf.sthames.nhs.uk**References**

- 1 **Compston JE**, Vedi S, Stephen AB, *et al*. Reduced bone formation in UK Gulf War veterans: a bone histomorphometric study. *J Clin Pathol* 2002;**55**:897-9.
- 2 **Dessein PH**, Stanwix AE. Why would fibromyalgia patients have osteoporosis? *J Rheumatol* 2000;**27**:1816-17.
- 3 **Hoskin L**, Clifton-Bligh P, Hansen R, *et al*. Bone density and body composition in young women with chronic fatigue syndrome. *Ann N Y Acad Sci* 2000;**904**:625-7.
- 4 **Unwin C**, Blatchley N, Coker W, *et al*. Health of UK servicemen who served in the Persian Gulf War. *Lancet* 1999;**353**:169-78.

CORRECTION

Internet referencing. Rubin A. *J Clin Pathol* 2003;**56**:399.

Dr C Rubin's address should have been Watford General Hospital not Watford Green Hospital.

BOOK REVIEWS**Pathology of Vascular Skin Lesions: Clinicopathological Correlations**

Sanguenza OP, Requena L. (\$159.50.) Humana Press, 2003. ISBN 1 58829 182 0.

This book fulfills the goal set out in the foreword by the authors. Indeed, there is no

book devoted exclusively to the clinicopathological features of vascular skin lesions, and this book fills that void.

The book has black and white clinical and histopathological illustrations but is supplemented by a CD with colour versions. This companion CD is much better, although some illustrations are very out of focus, especially the low power pictures. I suppose if the reader is prepared to revert from the book to computer images, then the CD is a useful substitute. But that may not always be possible.

Most, if not all, vascular cutaneous lesions are covered in this book. The text is brief and in some areas, disappointing. In particular, haemangiopericytoma is covered in a very superficial manner. My impression is that the text has to be supplemented by reading other textbooks containing vascular lesions for more detail. The most disappointing feature of the book is that some of the illustrations are not informative at all. The small size format allied to black and white do not do justice to the book. Better quality black and white pictures may have obviated the need for colour. Most benchbooks are used to "wallpaper match" and because many of the illustrations are of such low magnification, even this becomes difficult.

However, this is a useful book that has all the lesions in one compendium. I think that dermatologists, who dabble in histopathology, and trainees will find this book more useful than fully fledged dermatopathologists. I think there is an opportunity to improve the book in future editions.

R Chetty

Diagnostic Cytopathology, 2nd edition

Gray W, McKee T, eds. (£195.00.) Elsevier Science Limited, 2003. ISBN 0 443 06473 3.

It is a daunting task to produce a contemporary and comprehensive textbook of cytopathology that adequately deals with the full expanse of the topic. This difficulty is compounded by the need to write a text that is not only appealing, but functional as a desktop reference for a diverse group of practitioners, from student cytotechnologists to expert cytopathologists. Yet, the second edition of *Diagnostic Cytopathology* manages to accomplish much of this task.

This single volume book is organised into a systems based review of general cytopathology. The second edition maintains its focus on cytomorphology with minimal discussion of sampling and preparatory techniques. There is some attention paid to the impact on cytomorphology of exfoliative versus fine needle aspiration sampling; however, the effects of cytopreparation on the cytological features and interpretation are not frequently discussed. This is particularly evident in the differences in cytomorphology that occur as a result of liquid based preparations. The application of immunocytochemistry is covered in most sections, but again greater detail would

be useful, and there is little discussion on the use of other ancillary studies. New technology is mentioned as overviews on liquid based processing, automated screening devices, and other modalities for screening for cervical cancer, in addition to newer sampling techniques, such as endoscopic ultrasonographically guided pancreatic fine needle aspiration.

There is variability in the comprehensiveness of coverage of some topics, but particular strength is shown in the sections relating to the respiratory system, serous cavities, breast, and female genital tract. With some other chapters, the advanced reader may be left wanting for details when topics are rather briefly discussed. To compensate, the reader is at times directed to a chapter's bibliography for further information, and in general these bibliographies are reasonably comprehensive, although inclusion of more recent references is inconsistent. Novice readers, in particular, may appreciate the use of bulleted lists of the pertinent cytological features of the major entities, which have been offset from the text by coloured headings and are followed by a discussion of the diagnostic pitfalls, review of the differential diagnoses, and often with a suggested approach to the separation of entities under consideration. These discussions could have been aided by the inclusion of tables to contrast and compare differential diagnostic entities. In addition, allusions to the limitations of cytomorphology to separate some entities could have been more clearly stated.

The nomenclature and classification systems used in the book follow most standard schema, but there are some chapters in which the most recent classification system is not applied. Notable examples include the use of the 1973 World Health Organisation (WHO) classification for urothelial neoplasms rather than the 1998 WHO/International Society of Urological Pathology Consensus classification, and the use of the revised European-American classification of lymphoid neoplasms (REAL classification) rather than the 2001 WHO classification. The book does not address recent changes to histological classifications that have rendered definitive cytological diagnosis more difficult. This is illustrated by bronchioloalveolar carcinoma, which by the 1999 WHO histological definition must be a non-invasive lesion. Because invasiveness cannot be accurately assessed in exfoliative or fine needle aspiration specimens, a cytological diagnosis of bronchioloalveolar carcinoma may not correlate with the ultimate histological classification of the excised lesion; a dilemma that is not addressed within the discussion of this entity.

The book is richly endowed with colour photomicrographs aptly demonstrating the pertinent cytological features of normal cellular constituents and pathological entities under discussion. The cytological images include air dried and alcohol fixed material with both May-Grünwald-Giemsa and Papanicolaou staining. Some illustrations of liquid based preparations are included, but most of the illustrations are of conventional cytological preparations. Occasional gross and

histological photographs are used to good effect and the focus, clarity, and colour balance of most illustrations are good to excellent.

Diagnostic Cytopathology demonstrates a number of strengths and is particularly useful as an introductory and general reference book. Further updating would be useful with regard to classification schemes and the impact of new technologies on cytological interpretation, but this does not detract from the wonderful illustrations and sound basis in cytomorphology with which the book is endowed.

S Boerner

CALENDAR OF EVENTS

Full details of events to be included should be sent to Maggie Butler, Technical Editor JCP, The Cedars, 36 Queen Street, Castle Hedingham, Essex CO9 3HA, UK; email: maggie.butler2@btopenworld.com

Practical Pulmonary Pathology

22–25 July, 2003, Brompton Hospital, London, UK

Further details: Professor B Corrin, Brompton Hospital, London SW3 6NP, UK. (Fax: +44 (0) 20 7 351 8293; Email: b.corrin@ic.ac.uk)

ACP Management Course for Pathologists, 2003

10–12 September 2003, Hardwick Hall Hotel, Sedgefield, County Durham, UK

Further details: Ms Valerie Wood, ACP Central Office, 189 Dyke Road, Hove, East Sussex, BN3 1TL, UK. (Tel: +44 01273 775700; Fax: +44 01273 773303; Email: valerie@pathologists.org.uk)

Dermatopathology Update

10–13 September 2003, Fairmont Copley Plaza Hotel, Boston, Massachusetts, USA

Further details: Tel: +1 617 384 8600; Email: hms-cme@hms.harvard.edu; website: www.cme.hms.harvard.edu

Predictive Oncology Meeting

15–16 September 2003, Solent Hotel, Fareham, Portsmouth, UK

Further details: Professor Ian A Cree, Translational Oncology Research Centre, Department of Histopathology, Michael Darmady Laboratory, Queen Alexandra Hospital, Cosham, Portsmouth PO6 3LY, UK. (Tel: +44 (0)23 92 286378; Fax: +44 (0) 23 92 286379; Email: ian.cree@porthosp.nhs.uk)

Medicare India

6–8 April 2004, Pragati Maidan, New Delhi, India

Further details: Rob Grant, Kinex Log, 5 New Quebec Street, London W1H 7DD, UK (Tel: +44 (0) 207 723 8020; Fax: +44 (0) 207 723 8060; Email: rob.grant@kinexlog.com; Website: www.medicare-expo.com or www.kinexlog.com)



Accuracy and completeness of the documentation of blood culture results

J R Greig

J Clin Pathol 2003 56: 558
doi: 10.1136/jcp.56.7.558

Updated information and services can be found at:
<http://jcp.bmj.com/content/56/7/558.1.full.html>

These include:

References

This article cites 3 articles, 2 of which can be accessed free at:
<http://jcp.bmj.com/content/56/7/558.1.full.html#ref-list-1>

Email alerting service

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
<http://group.bmj.com/group/rights-licensing/permissions>

To order reprints go to:
<http://journals.bmj.com/cgi/reprintform>

To subscribe to BMJ go to:
<http://group.bmj.com/subscribe/>