General medicine for the physician

Nick Hudson

Introduction

The May 2006 'General medicine for the physician' conference was the first time this regular symposium, organised by the Royal College of Physicians (RCP), has taken place outside London. Over 250 delegates attended the two-day event, highlighting its success and reinforcing the importance of regional events.

In an era of the European Working Time Directive, increasingly complex shift patterns, 'ward-based' care and the disappearance of experienced senior house officers, the consultant physician can be forgiven for feeling an increasingly isolated figure. For those with a specialist interest it is also a disquieting observation that colleagues in other specialties often appear to have a fairly rudimentary knowledge of contemporary investigations and management of patients within general medicine. The disquiet arises less from concerns about their actions but that, as time passes, our own actions in the arena of general medicine outside of our specialty may be found wanting. To this end the conference allowed an excellent opportunity to allay fears and bolster confidence with an emphasis on practical aspects of diagnosis and management in a range of conditions which frequently present to the medical assessment unit (MAU).

Highlights of the conference

Professor Peter Mathieson presented a practical review of the early management of renal failure. He emphasised the importance of correctly interpreting any given serum creatinine level and the non-linear relation to glomerular filtration rate (GFR). He endorsed the usefulness of the estimated GFR which is now calculated automatically by biochemistry laboratories across the country upon receipt of urea and electrolyte requests. He emphasised the importance of recognition and management of both hyperkalaemia and fluid overload and the need for early referral to a renal unit if conservative measures were ineffective. 'Renal-dose' dopamine appears to have been consigned to the history books.

The assessment of 'query subarachnoid haemorrhage' (SAH) in the MAU is always a source of concern. Miss Joan Grieve, however, presented some reassuring data; computed tomography (CT) remains preferential to magnetic resonance imaging in the early assessment of SAH and will detect 95% if performed within 48 hours. Xanthachromia will be present in cerebrospinal fluid taken at 12 hours in 96% of patients. She illustrated that SAH occurring outside the working symptom definition of sudden onset (first or worse) headache, usually maximum within moments or minutes and lasting for at least one hour, were extremely rare. She felt that prospective studies had somewhat discredited the concept of 'warning leaks'. In the second part of her presentation she turned to the management of patients who had returned from neurosurgery but still required inpatient care emphasising the importance of avoiding dextrose-based fluids and in treating hyponatraemia, often a result of cerebral wasting, but avoiding dehydration which may in turn contribute to vasospasm.

On a similar theme Professor Peter Rothwell explored the appropriate imaging and time frames for investigation and diagnosis of transient ischaemic attack (TIA) and minor stroke. This emphasis becomes more important given that these patients are increasingly investigated as outpatients and, as he illustrated, diagnosis on clinical assessment was poor. Diffusion-weighted magnetic resonance imaging has become the new gold standard to investigate possible recent ischaemic events, particularly if performed early, and this modality has changed the diagnosis in 20% of cases. He warned that 10% of patients in TIA clinics had experienced haemorrhagic rather than ischaemic events and may react badly to anticoagulation. He reiterated the RCP guidelines that TIA and minor stroke should be assessed at least within seven days as the time window for the prevention of the majority of subsequent attacks could only be measured in days, not weeks.[1] Similarly, timing of intervention with carotid endarterectomy heavily influenced the outcome with delayed assessment and treatment contributing to morbidity and mortality. Individual risk and early clinic asccess should help address these issues. For those who have watched the benefits of increasingly early and proactive intervention in ischaemic heart disease over the last two decades it is gratifying to see the same developments in cerebrovascular medicine.

Dr John O'Grady emphasised the importance of early diagnosis in the management of both acute and subacute liver failure. The latter, surprisingly, has a far worse prognosis while sepsis is often a contraindication to transplantation. Although legislation

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introduced in the UK in 1998 limited over-the-counter sales of paracetamol thus reducing the incidence of paracetamol-induced liver failure, it remains by far the commonest cause followed by seronegative hepatitis. N-acetylcysteine and aggressive rehydration remains the foundation of management and Dr O'Grady commended a low threshold for starting therapy in suspected individuals. Referral to specialist centres depended on the key factors of metabolic acidosis and oliguria as well as the more recognised coagulopathy and encephalopathy. Overall one-year survival following liver transplantation is 74% although some centres are achieving survival of 85–90%. The shortage of cadaver donor livers remains problematic leading to a focus on auxiliary liver and living-related liver transplantation.

Dr Paul Jenkins reviewed evidence-based management of respiratory emergencies and the current trend to treat cases as outpatients. The diagnosis of pulmonary embolism (PE) remains problematic in the MAU setting. Ninety per cent of MAU patients at presentation are either dyspnoeic or tachypnoeic and the absence of pleurisy, hypoxia or an abnormal chest X-ray, effectively excludes the PE diagnosis. He illustrated that clinical scoring systems, such as the Wells score, could be highly effective in exclusion but that the D-dimer blood test was only helpful in conjunction with clinical assessment and could not be relied on alone for diagnosis. Negative ventilation perfusion scans ruled out PEs but false-positive results were common – the gold standard imaging at present remains the CT pulmonary angiogram. Further discussion covered practical aspects of the management of asthma and spontaneous pneumothorax with reference to the American College of Chest Physicians 2001 guidelines.[2]

Professor Elwyn Elias examined the concept that genetically determined aberrations in the liver can impair its ability to safely detoxify and eliminate hazardous xenobiotics. This in turn generates haptens, which may trigger an autoimmune response, and lead to injury or influence disease progression. He stressed the role of nuclear receptors, eg the pregnane X receptor, which regulate the expression of CYP3A4 and MDR1 whose products are present in bile secretion and influence intestinal absorption of xenobiotics.

Dr Ian Wilkinson focused on case histories in the management of hypertension and the audience participation revealed a surprising degree of variability in answers in an area where many may have felt themselves fairly up to date with therapy. He reminded the audience of the different risks associated with systolic and diastolic pressure in older and younger people respectively. He reiterated that the target blood pressure of 140/85 was lowered in patients with diabetes mellitus, renal

Conference programme

Day 1

COMMON GENERAL MEDICAL DILEMMAS

- **A creatinine of 300 – what do I do?**
Professor Peter Mathieson, University of Bristol

- **Is it a sub arachnoid haemorrhage – early management?**
Miss Joan Grieve, National Hospital for Neurology and Neurosurgery, London

- **The acute painful joint – what do I do?**
Dr Huw Beynon, Royal Free Hospital, London

- **Acute management of transient ischaemic attack and minor stroke**
Professor Peter Rothwell, The Radcliffe Infirmary, Oxford

- **Liver failure – early management**
Dr John O'Grady, King's College Hospital, London

- **Lumleian Lecture: Co-ordinated defence and the liver**
Professor Elwyn Elias, University of Birmingham

INFECTIOUS DISEASES

- **Tuberculosis – an update on manifestations, diagnosis and treatment**
Professor Peter Davies, The Cardiothoracic Centre, Liverpool

- **HIV – what's new?**
Professor Brian Gazzard, Chelsea and Westminster Hospital, London

ENDOCRINOLOGY

- **Diabetes for the General Physician – what new do I need to know?**
Dr Karim Meeran, Charing Cross Hospital, London

- **Other endocrine emergencies**
Professor John Monson, St Bartholomew's Hospital, London

Day 2

CLINICAL PROBLEMS

- **Some respiratory emergencies – whom to admit, whom to investigate and how?**
Dr Paul Jenkins

- **Odd anaemias – investigation by the general physician**
Dr Trevor Baglin, Addenbrooke's Hospital, Cambridge

- **Case histories in hypertension**
Dr Ian Wilkinson, University of Cambridge

- **Upper gastrointestinal haemorrhage**
Dr Christopher Roseveare, Southampton University Hospitals NHS Trust

HAEMATOLOGY

- **Paraproteinaemia – who to investigate, who to refer?**
Dr Donald Macdonald, Charing Cross Hospital, London

- **The patient with low platelets, what do I do?**
Professor Adrian Newland, Barts and the London NHS Trust

CARDIORESPIRATORY UPDATE

- **What's new for heart failure?**
Dr Theresa McDonagh, Royal Brompton Hospital, London

- **Primary angioplasty for myocardial infarction**
Dr Nick Curzen, Wessex Cardiac Unit, Southampton

- **Diffuse parenchymal lung disease – when to think of it, what might cause it and how to investigate it**
Dr Robina Coker, Hammersmith Hospitals NHS Trust, London

impairment and cardiovascular disease or when blood pressure monitoring was by ambulatory methods. The magnitude of risk associated with hypertension appears higher for cardiovascular disease rather than cerebrovascular disease but conversely the correction of high blood pressure is of greater benefit for the prevention of strokes rather than heart attacks. Observations also suggest, perhaps surprisingly, that lower diastolic blood pressure may also increase risk of cerebrovascular events. His discussion on pharmaceutical intervention algorithms focused on the increasing evidence of the ineffectiveness of beta-blockers in the prevention of the sequelae of hypertension, possibly because they fail to reduce central aortic systolic pressure. Furthermore beta-blockers in combination with diuretics appear to increase the risk of diabetes. Some of these observations were new to many delegates, including the author, but were endorsed shortly after the meeting by the National Institute for Health and Clinical Excellence.[3]

Perhaps the most thought provoking talk was by Dr Nick Curzen whose thesis that thrombolysis was a poor and unacceptable alternative to primary angioplasty in the management of acute myocardial infarction was both lucid and entertaining. Although the needle time for provision of thrombolysis has been reduced he showed convincing evidence that within the parameters of length of stay, reinfarction and mortality in primary angioplasty was superior. He explained that this was in part due to angioplasty addressing both the mechanical obstruction within the coronary vessel and the thrombosis rather than the latter alone and that this resulted in better distal vessel perfusion and preservation of myocardial function. His main contention was that provision of a comprehensive national primary angioplasty service required political will and manpower resources, both lacking at present.

In brief

Professor Peter Davies discussed the recent rise in the incidence of tuberculosis in the UK through patients contracting the disease abroad, and the links with HIV infection. He focused on diagnosis including some of the novel diagnostic agents, for example the interferon gamma tests, and explored some of their limitations. Professor Brian Gazzard illustrated the huge advances in the treatment of HIV infection, the importance of complete suppression of viral replication and the factors which influence compliance with prolonged, toxic and complex treatment regimes. Diabetic and endocrinological emergencies in the MAU where comprehensively discussed by Dr Karim Meeran and Professor John Monson with attention to the management 'fine tuning' that the non-specialist frequently forgets. Dr Trevor Baglin gave a highly practical talk on investigation of anaemia, stressing the importance of the mean cell volume in directing subsequent investigations.

Conclusion

As outpatient general medicine has fragmented into specialty-based care the need for a new specialty of acute medicine based within the MAU has been recognised. Until these posts become universal there remains a responsibility for all physicians to keep themselves informed of progress in the management and treatment of patients outside their specialty, a task considerably helped by this, and similar, conferences.

References

1 Royal College of Physicians. *Care after stroke and transient ischeamic attack: information for patients and their carers*. London: RCP, 2004.
2 American College of Chest Physicians. Management of sontaneous pneumothorax. *Chest* 2001;119:590–602.
3 National Institute for Health and Clinical Excellence. *Hypertension: management of hypertension in adults in primary care*. London: NICE, 2006.