Letters to the Editor

Significance of low serum ferritin levels in the elderly

Sir,

Fortuitously, the letter by Joosten *et al.*¹ describing the receiver operating characteristic curve for serum ferritin coincided with the publication of the study showing the impact of ventilation/perfusion scanning on diagnostic precision in pulmonary embolism.² In the PIOPED study the use of high probability lung scan as the decisive diagnostic parameter yielded a specificity of 97% corresponding to a sensitivity of 41%,³ the latter statistic perhaps providing comfort for the perception prevailing amongst 47% of Scottish consultants, that pulmonary scintigraphy was of no value in the diagnosis of pulmonary embolism.⁴ The sensitivity of 98% which accompanied the use of the low probability scan was accompanied by a fall in specificity to 10%,³ exemplifying the truism that all diagnostic cut-off levels are a trade-off between sensitivity and specificity. For common, and highly treatable, conditions such as iron deficiency and pulmonary embolism, most clinicians are prepared to maximize sensitivity at the expense of specificity, especially if supportive circumstantial evidence can be obtained from tests such as the haematological response to iron supplements in the case of suspected sideropaenia,⁵ and lower limb venography in suspected thrombo-embolic disease.⁶ Sensitivity becomes subservient to specificity, however, when maximum diagnostic accuracy is a precondition for testing a hypothesis, hence the use of a serum ferritin < 10 ng/ml as the diagnostic parameter for iron deficiency in the study comparing mean corpuscular volume and mean corpuscular haemoglobin.⁷

O.M.P. Jolobe

Department of Medicine for the Elderly,
Tameside General Hospital,
Fountain Street,
Ashton-under-Lyne,
Lancashire OL6 9RW, UK.

References

1. Joosten, E., Dereymaeker, L., Pelemans, W. *et al.* Significance of low serum ferritin levels in the elderly (letter). *Postgrad Med J* 1993, **69**: 892–893.
2. Kaboli, P., Buscombe, J.R. & Ell, P.J. Reporting ventilation-perfusion lung scintigraphy: impact on subsequent anticoagulant therapy. *Postgrad Med J* 1993, **69**: 851–855.
3. The PIOPED Investigators. Value of ventilation/perfusion scan in acute pulmonary embolism. *JAMA* 1990, **263**: 2753–2759.
4. Prentice, A.G., Lowe, G.D.O. & Forbes, C.D. Diagnosis and treatment of venous thromboembolism by consultants in Scotland. *Br Med J* 1982, **285**: 630–632.
5. O'Connor, N.T.J. & Hoffbrand, A.V. Anaemia in systemic disease. In: Delamore, I.W. & Lin Yin, J.A. (eds) *Haematological Aspects of Systemic Disease*, Vol. 1. Bailliere Tindall, London, 1990, pp. 33–65.
6. Dalen, J.E. When can treatment be withheld in patients with suspected pulmonary embolism? *Arch Intern Med* 1993, **153**: 1415–1418.

7. Jolobe, O.M.P. & Rakicka, H. Significance of low serum ferritin levels in the elderly (letter). *Postgrad Med J* 1993, **69**: 892.

Prolonged fever and rigors in disseminated tuberculosis

Sir,

We read with great interest the report by Harvey and colleagues on rigors in tuberculosis.¹ We would like to report a similar case whereby rigors along with fever were also prominent presenting features but, unlike those cases reported by Harvey, the response to anti-tuberculous treatment was much slower.

A 30 year old Indian baker was admitted with fever, chills and sweating of 18 days duration. He had cervical lymphadenopathy and mild tender hepatomegaly without jaundice. His temperature was 39–40°C, intermittent and associated with frequent rigors. Investigations showed raised liver enzymes, but normal bilirubin, albumin and prothrombin time. ESR was 93 mm in the first hour and tuberculin test of 20 mm induration. Full blood count, electrolytes, urea, urine examination and chest X-ray were normal. Blood cultures, blood films for malaria parasites and brucella antibodies were also negative. Ultrasound showed mild hepatomegaly with a normal gallbladder. Biopsies from lymph node and liver were identical and revealed caseating granulomas with numerous acid fast bacilli. Treatment with isoniazide, rifampicin and pyrazinamide was commenced. Fever and rigors responded slowly and only subsided completely after 33 days of therapy. An excellent witness to the effectiveness of therapy was a steady decline of the alkaline phosphatase from an initial level of 4–5 times the upper limit of normal.

We share the views of our colleagues¹ that the possibility of disseminated tuberculosis should be seriously considered in the differential diagnosis of rigors particularly in areas where it is prevalent.

H.M. Al Attia

Z.A. Shanaa

Y.M. Al Ahmad

Medical Department of Mafraq Hospital,
Abu Dhabi,
UAE.

References

1. Harvey, C. Eykyn, S. & Davidson, C. Rigors in tuberculosis. *Postgrad Med J* 1993, **69**: 724–725.

Status epilepticus secondary to fluoxetine

Sir,

Fluoxetine, a selective serotonin reuptake inhibitor, has been shown to be effective in the treatment of depression.¹ Although it has been shown that fluoxetine does not

prolong electrically induced seizures,² there have been 181 cases of convulsions associated with fluoxetine reported to the WHO Adverse Drug Reaction Section.³ In contrast to the following case these reports were of seizures of short duration and in many cases associated with an underlying convulsive disorder.

A 50 year old female was admitted with a 24-hour history of bizarre behaviour, visual hallucinations and a grand mal seizure followed by loss of consciousness. She had a background history of manic-depressive psychosis for the previous 12 years. Fluoxetine, 20 mg daily and alprazolam 2 mg four times a day had been prescribed 2 months prior to admission. There was no past or family history of convulsions. The patient was having a grand mal seizure on admission, which initially responded to diazepam 5 mg intravenously. This was followed by a further grand mal seizure which responded poorly to intravenous bolus diazepam 10 mg and a phenytoin infusion 10 mg 6 hourly. Breakthrough convulsions occurred and on day 2 of the admission therapy was changed to a chlormethiazole infusion (0.8% solution). Meanwhile, a toxicology screen confirmed the systemic presence of alprazolam and fluoxetine (not quantifiable). A computed tomographic scan of the brain showed no intracranial pathology and a lumbar puncture was normal. Over the next 5 days the chlormethiazole was required to prevent/treat breakthrough convulsions. By day 6 post-admission, mentation was normal and no further convulsions occurred. The patient denied taking an overdose of her prescribed medications. She was transferred to the psychiatric unit for further management. On review 6 months subsequent to admission she had had no further convulsions nor had she been prescribed 5-hydroxytryptamine reuptake inhibitors.

The salient points of this case are the prolonged duration of the seizures and their resistance to standard anti-convulsive therapy. We postulate that the long half-life of fluoxetine (4 days) and that of its active metabolite norfluoxetine (8 days) contributed to the prolonged duration of the adverse event. In addition, this case report is of interest in that the patient was also taking alprazolam. Fluoxetine is known to inhibit the metabolism of benzodiazepines.⁴ Theoretically, this should result in enhanced serum levels of alprazolam and a diminished susceptibility to convulsions. Clearly, this did not occur in our case.

L. Madi
A.A.J. O'Brien
J. Fennell
Department of Clinical Medicine,
St Columcille's Hospital,
Loughlinstown,
Co. Dublin,
Eire.

References

- Altamura, A.C., Montgomery, S.A. & Wernicke, J.F. The evidence for 20 mg a day of fluoxetine as the optimal dose in the treatment of depression. *Br J Psychiatry* 1988, **153** (Suppl 3): 15-24.
- Gutierrez-Esteinou, M.D. & Pope, H.G. Jr. Does fluoxetine prolong electrically induced seizures? *Convulsive Ther* 1989, **5**: 344-348.

- European Adverse Events Profile on Prozac. WHO 1989-90.
- Lemberger, L., Rowe, H., Bosomworth, J.C., Tenbarger, J.B. & Bergstrom, R.F. The effect of fluoxetine on the pharmacokinetics and psychomotor responses of diazepam. *Clin Pharmacol Ther* 1988, **43**: 412-419.

Calcified brain metastasis in non-Hodgkin's lymphoma

Sir,

Calcified brain metastasis is uncommon. Although calcium deposits may be found microscopically in 1.1% of surgical and 5.9% of autopsy specimens of brain metastasis,^{1,2} radiographic demonstration of the same has ranged from 1 to 3.5%.²⁻⁴ Calcified brain metastasis due to non-Hodgkin's lymphoma is rare.⁵

A 9 year old girl with non-Hodgkin's lymphoma was referred with mild proptosis of 6 months' duration. Neurological examination was unremarkable. Cranial computed tomography (CT) (Figure 1) revealed a calcified, non-enhancing mass in the right frontal lobe. The lesion was biopsied by a right frontal trephine. Histopathology of the specimen revealed non-Hodgkin's lymphoma with widespread calcium deposits and necrosis. Cranial irradiation was advised but the child died 12 days later due to widespread disease.

In the pre-CT era series, calcification in brain metastasis was occasionally reported. Griffiths⁴ found calcification on skull X-ray in one out of 91 patients. In recent years, CT has become the most sensitive imaging mode to detect intracranial calcification. Deck *et al.*³ identified calcification in two out of 57 patients with brain metastasis. Anand and Potts⁶ reported seven patients with calcified brain metastasis on CT. The calcium deposits were described as punctate, curvilinear or amorphous, and sometimes closely resembled haemorrhage.

Deposit of calcium in the tumour is thought to be a dystrophic process,⁷ that is, calcium deposits inside the degenerative or necrotic tissues that are not easily

Figure 1 Plain CT showing calcified metastasis from non-Hodgkin's lymphoma.