

arrange appraisals, the survey still identified one third as having had no appraisals and one fifth as not knowing who their educational supervisor was. General Professional Training (GPT) visits to trusts throughout the country over the last few years have found that appraisals are increasingly happening although it is rare for it to be reported that every SHO has regular appraisals in any particular Trust. A related and frequently reported issue describes SHOs questioning the value of some appraisals. It seems likely therefore that not all 'educational supervisors' are fully signed up to the appraisal process or are too busy to carry them out. However, with the arrival of competence based assessment of trainees it is becoming increasingly important that they should be able to deliver this process. If, for whatever reason, a consultant is unable to undertake this task he or she should hand over the responsibility to another colleague who in turn might exchange clinical for educational sessions.

The Core Curriculum<sup>3</sup> should underpin the training programme in every Trust and should inform the planning of this programme. Although it is disappointing that 50% of SHOs in this survey had never read the curriculum, perhaps a more positive approach would be that we should be pleased that 50% have done so when it has only been available for 12 months. However, it is surprising that in the survey the Appraisal Record was not found to be in more regular use as our GPT visits to trusts usually report that it has 70–90% uptake. The Appraisal Record is available on the RCP website (and in printed format with the curriculum). It should be a joint responsibility of the trainee and the supervisor for this to be kept up to date. In future it will be an essential part of a trainee's portfolio. The conclusion in the above letter suggesting the provision of other documentary evidence of satisfactory appraisal and assessment before completion of GPT will, with the implementation of *Unfinished business*, become a reality.

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**Driving restrictions after stroke: doctors' awareness of DVLA guidelines and advice given to patients**

Transient ischaemic attack (TIA) and stroke are commonly encountered on general medical take and many patients are discharged with little or no residual deficit. Such patients should be advised however, that according to the DVLA guidelines they should not drive for one month after the event.<sup>1</sup> They may resume driving after this time if clinical recovery is satisfactory. There is no need to notify the DVLA unless there is residual neurological deficit. Minor limb weakness alone does not require notification but it is left to the clinician's judgement as to what constitutes significant deficit. Doctors are advised to document the advice given in the notes.

We performed a retrospective study to identify whether patients were given appropriate advice regarding driving following TIA or stroke and to investigate doctors' awareness of the DVLA guidelines. Hospital notes of patients with a discharge diagnosis of TIA or CVA during a six-month period were reviewed, noting documentation regarding driving status and driving advice given on discharge. Patients were excluded if they were not discharged home or had persistent neurological deficit on discharge. In addition, 35 doctors involved on general medical take were asked face-to-face standardised questions regarding awareness of any driving restrictions following TIA.

Of the 30 patients who met the criteria, driving status was recorded in the notes of two patients (7%). Advice given regarding driving on discharge was not documented in any of the patients' notes. We subsequently contacted 25 of the 30 patients by telephone and asked them about driving status and advice given on discharge, using

a standardised format. Out of the 25 patients 15 (60%) stated they had been car drivers, of whom nine (60%) continued to drive. Only four (16%) of the 25 patients recalled being asked about driving status and being given driving advice, of which two were given the correct advice. In addition, on questioning we found that only four out of 35 doctors were aware of the correct guidelines (Table 1).

This study indicates that documentation of driving status is poor, with very few patients given appropriate advice on discharge. This was also highlighted in an American study, in which 48% of patients received no driving advice on discharge following stroke.<sup>2</sup> The poor knowledge of the guidelines is consistent with a study in Belfast, in which only four of 50 doctors questioned knew the guidelines for driving following stroke.<sup>3</sup>

The fact that driving status was documented in such a small number of medical notes is indicative of the low priority given to this aspect of the patient's social history. Given the potential medicolegal implications of failure to give appropriate advice to patients, improved education of doctors regarding driving restrictions is essential. Care pathways may improve documentation and future care pathways for patients with stroke should incorporate this.

**References**

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2 Fisk G, Owsley C, Pulley L. Driving after stroke: driving exposure, advice, and evaluations. *Arch Phys Med Rehabil* 1997;78:1338–45.

**Table 1. Responses of doctors when asked about driving restrictions after stroke**

Grade	Total	Aware of any restriction	Correct	Incorrect	Don't know
SHO	13	7	1	4	2
Specialist Registrar	12	9	2	5	2
Consultant	10	8	1	5	2
Total	35	24	4	14	6

- 3 Kelly R, Warke T, Steele I. Medical restrictions to driving: the awareness of patients and doctors. *Postgrad Med J* 1999;75:537-539.

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### Serious hyperkalaemia after short use of low molecular weight heparin in a diabetic patient

A 45-year-old lady was admitted to our unit with right calf pain and a provisional diagnosis of deep vein thrombosis (DVT). She also had type 1 diabetes, hypertension and previous recurrent DVT as well as seronegative rheumatoid arthritis. Her medication on admission included warfarin, human insulin, colchicine, lansoprazole and lisinopril. The right calf was a little swollen and tender; Homan's sign was negative. She was treated provisionally as suspected DVT with dalteparin. Her renal, hepatic and calcium levels were normal at the time of admission, as was her full blood count. Four days after admission her serum K had risen to 6.0 mmol/l from 4.4 mmol/l at the time of admission; this rose to 7.1 mmol/l on the following day. Because the electrocardiogram (ECG) showed a peaked T-wave and widened QRS complex, the hyperkalaemia was treated as an emergency with insulin, dextrose infusion and followed by calcium resonium. Both

lisinopril and dalteparin were stopped. On the same day the Doppler ultrasound scan did not confirm DVT. The patient was maintained on calcium resonium and serum K was monitored daily. One week later the serum K remained below 5.0 mmol/l.

Hyperkalaemia is more common in patients with diabetes and this can become worse by the use of drugs, especially angiotensin converting enzyme inhibitors and potassium-sparing diuretics.<sup>1</sup> The exact mechanisms for susceptibility of diabetic patients to develop hyperkalaemia is not well understood, but insulin deficiency/resistance,<sup>2</sup> hyporeninaemic hypoaldosteronism<sup>3</sup> or reduction in Na<sup>+</sup>-K<sup>+</sup> ATPase activity<sup>4</sup> has been proposed.

On the other hand hyperkalaemia is a recognised side effect of heparin therapy,<sup>5</sup> however, this is rare in those who had treatment for less than seven days, in which case regular monitoring of serum K<sup>+</sup> is recommended by the Committee on Safety of Medicines. This unwanted effect is thought to be more common in patients with diabetes mellitus.<sup>6</sup> The mechanism of heparin-induced hyperkalaemia is related to inhibition of aldosterone secretion by heparin.

This case represents an unusual presentation of acute hyperkalaemia occurring shortly after starting treatment with the low molecular weight heparin dalteparin (Fragmin) in a diabetic patient who is concomitantly taking an ACE inhibitor. Low molecular weight heparin is increasingly used in hospitalised patients as well as outpatients. Patients with diabetes will be

more likely to develop serious hyperkalaemia in these circumstances, as illustrated by this case. We recommend that patients with diabetes should have their potassium level monitored closely even if the duration of anticoagulant therapy is less than seven days.

We have reported this incident to the Medicine Control Agency and the manufacturer.

### References

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- 4 Mimura M, Makino H, Kanatsuka A, Yoshida S. Reduction of erythrocyte (Na<sup>+</sup>-K<sup>+</sup>) ATPase activities in non-insulin dependent diabetic patients with hyperkalaemia. *Metabolism* 1992;41:426-30.
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- 6 Busch EH, Ventura HO, Lavie CJ. Heparin-induced hyperkalaemia. *South Med J* 1987;80:1450-1.

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