A rare cause of hyponatraemia?

Sir,

Significant hyponatraemia (serum sodium level <125 mmol/litre) occurs in about 0.1% of hospitalized patients. Symptoms of the syndrome of inappropriate antidiuretic hormone secretion, one of the commonest causes of hyponatraemia, are non-specific (headaches, fatigue, anorexia, confusion, fits and reducing levels of consciousness).

A 73-year-old man presented to his GP in June 2009 with back pain, lethargy and feeling generally unwell. His serum sodium level was 126 mmol/litre with a urinary sodium level of 47 mmol/litre. In November 2008 his serum sodium level was 139 mmol/litre.

His regular medication included nifedipine retard 20 mg twice daily, perindopril 6 mg daily, simvastatin 20 mg at night, clopidogrel 75 mg daily and pantoprazole 20 mg twice daily.

On examination 2 weeks later, he was euvolaemic with a blood pressure of 160/70 mmHg both when lying and standing. There were no abnormal physical signs.

His serum sodium level was 120 mmol/litre, urea 3.5 mmol/litre and serum creatinine level 82 µmol/litre. His haemoglobin, liver function tests, prostatic-specific antigen and glucose levels were normal. Serum osmolality was 252 mosmol/kg with urinary osmolality 288 mosmol/kg. His thoracic and lumbar spine X-ray showed degenerative changes only and his chest X-ray was normal.

Fluid restriction to 800 ml was commenced and pantoprazole discontinued. One week later his serum sodium level had risen to 133 mmol/litre. Fluid restriction was discontinued and 2 weeks later his serum sodium was 137 mmol/litre with resolution of his symptoms.

Hyponatraemia is a rare complication of proton pump inhibitors and was first described in 1992 (Kaloustian and Veyssier, 1992). To date the Medicines and Healthcare products Regulatory Agency has received 63 reports of hyponatraemia in patients taking proton pump inhibitors. The hyponatraemia is believed to be caused by syndrome of inappropriate antidiuretic hormone secretion.

Non-specific symptoms in patients on proton pump inhibitors should not be dismissed without first checking electrolyte levels. Treatment includes discontinuation of the proton pump inhibitor and fluid restriction until serum sodium levels normalize.

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Kaloustian E, Veyssier P (1992) Hyponatrémie sévère: rôle possible de l'oméprazole. *Presse Med* **221**(19): 907–8

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Screening prospects for hypertension-related atrial fibrillation

Sir,

As hypertension is the single most common risk factor for non-valvular atrial fibrillation (Go et al, 2001), early identification of asymptomatic atrial fibrillation and, hence, need for thromboprophylaxis might significantly reduce the likelihood of embolic stroke being its first manifestation, the latter being an outcome of considerable cost to the individual and to society.

Iit might be worth evaluating the cost-effectiveness of Holter monitoring for early identification of asymptomatic atrial fibrillation in high-risk subjects, defined as those aged >50 years who have electrocardiographic (Perez et al, 2009) as well as echocardiographic (De Vos et al, 2009) signs which predict subsequent atrial fibrillation in association with hypertension.

The most recent of three studies which evaluated high-risk electrocardiographic stigmata in subjects aged >50 years identified, among other parameters, P wave index (the standard deviation of P wave duration across all leads) in excess of 35, abnormal P wave axis and premature atrial contractions respectively, as being significantly predictive of the occurrence of atrial fibrillation within 5.3 years (Perez et al, 2009). For echocardiography, the most recent evaluation identified prolongation of atrial conduction time as being significantly predictive of atrial fibrillation (within a time frame averaging 680 days) in a study comprising 249 subjects of mean age 62 years (De Vos et al, 2009).

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De Vos CB, Weijs B, Crijns HJGM et al (2009) Atrial tissue Doppler imaging for prediction of new-onset atrial fibrillation. *Heart* **95**: 835–40

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