This is the first reported case of formation and rupture of subcapsular liver haematomas resulting in death in a patient receiving APSAC and should be considered in patients with unexplained gastrointestinal symptoms, anaemia or haemodynamic changes post-thrombolysis. It has also been stated that lethal complications of thrombolysis may have been under reported and therefore this case may not be as unique as it appears, again stressing the importance of the autopsy.

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References

Advances in understanding alcohol withdrawal states

Sir,

Chronic ethanol treatment lowers levels of GABA (gamma-aminobutyric acid) as well as increasing the number of GABA receptors in the brains of alcoholics. GABA-mimicking agents, and those which increase GABA levels alleviate the alcohol withdrawal in animals. Gamma-hydroxybutyrate is both precursor and a metabolite of GABA as well as being classified as a possible GABA agonist. Recently, oral gamma-hydroxybutyric acid has proved therapeutic in treating the alcoholic withdrawal state in man. The proposed mode of action of the latter medication suggested by these authors was via its GABA-like action, since drugs which are clinically effective in treating alcohol withdrawal have all been found to have some direct or indirect GABA-like-effect in the nervous system. This also applies to analgesic nitrous oxide, in that a nitrous oxide–diazepam interaction has been demonstrated, possibly with both drugs acting at the same site. This conclusion was reached because their mutual effect was reversed by flumazenil, an inverse benzodiazepine agonist. These workers also suggested that opioid activity could influence the affinity of benzodiazepine binding sites.

Analgesic nitrous oxide is used clinically in alcohol withdrawal states for distinguishing those patients requiring intensive in-patient care from those that do not. Some of the factors responsible for this difference may include the degrees of liver pathology and of organic brain damage.

Patients with cirrhosis without overt hepatic insufficiency seem to tolerate morphine reasonably well, and even those with cirrhosis who have had hepatic coma do not have serious reactions following a single therapeutic dose of morphine, this despite the fact that the duration of morphine’s action would be expected to be prolonged thereby causing cumulative effects. Although morphine produces marked sedation in normal subjects, this same dosage in cirrhotics only produced mild sedation. This may explain the previous findings which show the relative safety of morphine in cases of chronic liver disease. Since analgesic nitrous oxide has opioid agonist properties, it is possible that its lack of effect in the severe cases of alcohol withdrawal might be related to decreased opioid sensitivity in the central nervous system associated with chronic liver disease. This factor clearly requires further investigation.

From the point of view of organic brain damage in chronic alcoholism, ethanol can modify opioid receptors and levels of brain opioid peptides. In view of this, it is conceivable that the more intense and prolonged the alcohol abuse has been, the more likely it is that the ensuing organic brain damage would be associated with marked alterations in affinity of opioid receptors. This would possibly cause impairment of the therapeutic effect of nitrous oxide in such cases when they present in withdrawal.

This proposed mechanism explaining the failure of analgesic nitrous oxide to ameliorate the condition in some severe cases is being investigated. It is possible that a combination of chronic liver and brain pathology would both contribute substantially to the therapeutic failure with analgesic nitrous oxide found in the minority of cases of alcohol withdrawal.

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References
CT and MR imagings of single thyroid lobe (thyroid hemiagenesis) with Graves' disease

Sir,

A case of aplasia of one thyroid lobe presenting with hyperthyroidism is described. To our knowledge this is the first reported study in which computed tomography (CT) and magnetic resonance imaging (MRI) have been used to diagnose hemiagenesis of the thyroid gland associated with Graves' disease.

A 28-year-old woman was referred to Fukuoka University Hospital in October 1990 for evaluation of a nodule in the left side of the neck associated with general fatigue, finger tremor and palpitation. She had been in good health until June 1989, when she began to notice increased nervousness, heat intolerance and palpitations. There was no history of excessive iodine intake or ingestion of medications, and no family history of thyroid disease.

On examination, the patient was anxious, pulse rate 98/min with warm and moist skin and a fine tremor of the hands. An enlarged and smooth nodule was palpated in the left lobe of the thyroid. The connecting isthmus was not palpable. No bruits or venous murmurs were heard and there was no evidence of Graves' ophthalmopathy. On clinical grounds she was thought to be hyperthyroid. Thyroid function tests showed: thyroxine (T4) 314.0 pmol/l (normal 51.2–153.6); triiodothyronine (T3) 5.9 nmol/l (normal 1.09–2.80); free T4 87.52 pmol/l (normal 9.65–25.74); free T3 5.9 nmol/l (normal 1.09–2.80); and thyrotropin (TSH) less than 0.1 mU/l (normal 0.32–3.1). Thyroid 123I-uptake was 62.8%/24 hours (normal 15–35) and scan revealed an enlarged left lobe with uniform and homogenous uptake; no right lobe was visualized (Figure 1). The image obtained with 99mTc-technetium was identical. Ultrasonography (US) of her neck, in addition to the palpable tissue in the left lobe, suggested an atrophic right lobe.

At that time we suspected Plummer's disease (toxic adenoma) with suppression of contralateral tissue. However, anti-microsomal antibody (MCHA) was slightly positive (1:400 to 1:800) and anti-thyroglobulin antibody (TGHA) was negative (1:100) (haemagglutination technique). TSH-binding inhibitor immunoglobulin (TBI); radioreceptor assay 1 and thyroid-stimulating antibody (TSAB; human thyroid adenylate cyclase stimulating activity) 2 were determined and both found positive; 42.7% and 56.9%, respectively (normal <15% and <145%, respectively). Computed tomography (Siemens DR2) and magnetic resonance imaging (Toshiba MRI-200/XT, 1.5 tesla) were carried out for further evaluation and failed to reveal any right sided thyroid tissue. A diagnosis of thyroid hemiagenesis associated with Graves' disease was established and effective therapy with methimazole provided.

Thyroid hemiagenesis is a rare anatomical anomaly which may be found in the presence of any type of thyroid disorder (adenomatous goitre, carcinoma, thyrotoxicosis and hypothyroidism). 3–6 MRI and CT are useful in distinguishing between unilateral thyroid disease and true hemiagenesis. Moreover, the serum determinations of the anti-TSH receptor antibodies are also helpful in differentiation between Plummer's disease and hemiagenesis with superimposed Graves' disease.

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