most difficulty when putting together our screening protocol for patients with Peutz–Jeghers syndrome. At the time, we took advice from a number of sources and these were distilled into the recommendations shown in our paper.

We acknowledge that screening for breast cancer is a controversial and vexed issue and will certainly take the comments of Messrs Parker and Michell into account when next revising our protocols, perhaps incorporating magnetic resonance imaging of the breast as technology improves.

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Endoscopic subtotal parathyroidectomy in patients with primary hyperparathyroidism

Sir

Since the first descriptions of successful parathyroidectomy for parathyroid tumour[1] in 1925 and subtotal parathyroidectomy for renal hyperparathyroidism[2] in 1960, few technical changes have occurred. In view of the natural benign history of minimally symptomatic primary hyperparathyroidism, controversy still exists about parathyroid surgery[3]. A new surgical approach has been attempted.

A 37-year-old man was admitted for investigation of severe pancreatitis; the patient had a familial history of hypercalcaemia and primary hyperparathyroidism. Apart from the previously resolved pancreatitis, there were no other signs or symptoms of hypercalcaemia. Computed tomography and magnetic resonance imaging of the abdomen revealed calcification of the entire pancreas, and endoscopic retrograde cholangiopancreatography showed a dilated pancreatic duct (14 mm in diameter), multiple pancreatoliths and no strictures. Echography of the gallbladder showed minimal sludge. Serum non-ionized calcium level was mildly raised (3·0 mmol/l; normal range 2·1–2·6 mmol/l) with a serum parathyroid hormone level of 10·2 (normal range 2·4–14·6 pmol/l). Echography of the neck did not show an adenoma, but a technetium-99m SESTAMIBI (*Cardiolite*; DuPont, Wilmington, Delaware, USA) scan showed four abnormal uptake foci consistent with primary hyperparathyroidism.

On 15 November 1995, the patient underwent laparoscopic cholecystectomy with cholangiography and laparoscopic longitudinal pancreaticojejunostomy with pancreatolith extraction. On 28 November 1995, he underwent endoscopic subtotal parathyroidectomy. Four 5-mm trocars were inserted under the platysma muscle, 1 cm above the clavicle and sternal notch. Carbon dioxide was insufflated to 15 mmHg to create a space above the strap muscles. Employing a 5-mm endoscopic scissor and dissector and a 5-mm 30° endoscope, the anterior and lateral borders of the trachea and thyroid were dissected. Biopsy specimens were obtained from four parathyroid glands. A left inferior thyroid nodule was found; a biopsy specimen was benign. Three and one-half glands were removed, and their blood supply was ligated with 5-mm titanium clips. The procedure took 5 h, and the patient had tachycardia (100–120 beats per min) and hypercarbia (end-tidal carbon dioxide level 41–45 mmol/l) necessitating hyperventilation. After operation he did well, with serum calcium level decreasing to normal (2·3 mmol/l). Subcutaneous emphysema was present from his eyelids to the scrotum and anteriorly on the thorax and abdomen, but it resolved on day 3 after surgery; the patient was discharged on day 4. He complained of hypersalivation for 3 days. A neck radiograph revealed carbon dioxide in the intermuscular planes.

This approach is feasible, cosmetically appealing, leaves the neck musculature intact and may benefit patients with primary hyperparathyroidism or parathyroid adenomas[4]. Vessels, nerves and nodes are highly magnified (×15–20), which may result in less recurrent nerve damage. Also, this approach may facilitate exploring the mediastinum for ectopic parathyroid glands. Refinements in instrumentation should decrease operating time and limit subcutaneous emphysema and hypercarbia.

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