

However, we disagree with Dr Lee that the toxicity should be attributed solely to rectal paracetamol. Firstly, the pharmacokinetics of rectal paracetamol have been extensively studied,<sup>3-6</sup> and it has been suggested that even a rectal regimen of 25 mg/kg every 6 hours for a mean of 2 to 3 days did not result in supratherapeutic concentration.<sup>3</sup> Secondly, because oral and rectal paracetamol are metabolised through the same mechanism, we do not agree that toxicity from rectal paracetamol would contribute differently to the hepatotoxicity of the patient described in our report. Nevertheless, this scenario highlights the risk of concomitant use of both oral and rectal paracetamol resulting in overdose of the drug.

In our report,<sup>1</sup> we wanted to illustrate the possibility of hepatotoxicity resulting from doses as low as 20 mg·kg<sup>-1</sup>·d<sup>-1</sup> given for 7 days. However, we do not want to imply that paracetamol is an unsafe drug. The discordance between drug history and serum drug level, as mentioned by Dr KW Ng, illustrates two points. On one hand, the discrepancy might reflect the possibility of inaccurate drug history, as pointed out by Dr Ng. On the other hand, a high serum paracetamol level might reflect the failure to metabolise and excrete the paracetamol. Hence, we would like to remind readers to look out for risk factors associated with impaired metabolism of paracetamol as listed in our article.<sup>1</sup>

We are grateful that Dr Lee reiterate the importance that N-acetylcysteine (NAC) should be considered in cases suspected to have hepatotoxicity secondary to chronic paracetamol poisoning, irrespective of the serum level. The reason NAC was not given in our case was because paracetamol overdose was not suspected in the first few days because of difficulty in obtaining a full drug history. The serum paracetamol assay was performed only after

exhaustive inquiry on the patient's drug history, which raised the suspicion of paracetamol overdose. A blood sample that was taken at the time of admission was used to confirm our suspicion. Thus, we would like to alert health care workers about the possibility of chronic paracetamol overdose when faced with patients with unexplained liver derangement, because—unlike acute paracetamol overdose, which often bears a simple, straightforward history—chronic paracetamol overdose is an entity that is often missed because of the difficulty in obtaining an accurate drug history.

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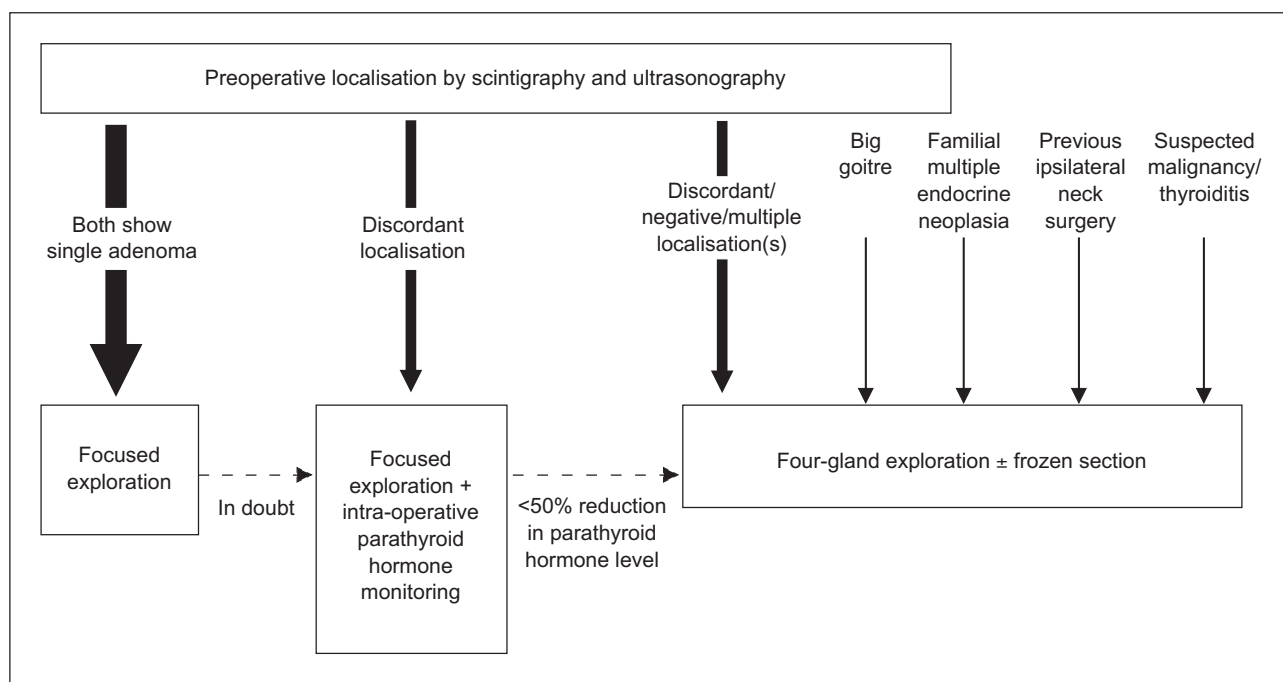
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# Minimally invasive parathyroidectomy for regional hospitals

*To the Editor*—As one with a lifetime passion for perfecting surgical techniques, I was particularly thrilled to read a recent article in the *Journal* extolling the virtues of focused dissection of a preoperatively localised parathyroid adenoma through a small direct wound<sup>1</sup>—a technique I have come to realise, after almost a decade's search, as the optimal minimalist approach to parathyroidectomy in the setting of a general hospital. With the advent of videoscopic technology, the past decade has witnessed dramatic and revolutionary changes in parathyroid surgery.<sup>2</sup> No sooner had I reported the first series of totally endoscopic parathyroid adenectomy than it dawned on me that the technique was unnecessarily cumbersome.<sup>3,4</sup> I went on to try the simpler—but still cumbersome—endoscopy-assisted technique, until I settled recently for

the most expedient, non-endoscopic technique, as described by the authors.<sup>5</sup> Notably, a local university hospital has also just reported the outcome of endoscopy-assisted parathyroidectomy for 66 adenomas.<sup>6</sup> Compared with the authors' open-dissection technique, the endoscopy-assisted technique was associated, understandably, with a longer operating time (77 versus 63 minutes) and a higher incidence of recurrent laryngeal nerve injury (3% versus 0%)—even in expert hands.<sup>6</sup> These findings reinforce my aforementioned conviction; however, some more controversies still exist.

I take issue with the authors' call for larger-scale randomised controlled trials comparing the focused approach with conventional bilateral exploration. Firstly, a plethora



**Fig. Proposed surgical strategy for primary hyperparathyroidism**

of articles around the time of the authors' publication have amply attested to the high efficacy of the focused exploration: there exist now thousands of reported cases successfully treated in this way (references provided on request). Secondly, efficacy aside, a randomised trial is not needed to show that four-gland exploration, whilst incurring more work, takes longer time, and results in a bigger wound than one-gland exploration.<sup>7</sup> Thirdly, the operative approach should ideally be individualised and carefully selected (Figure); randomly assigning patients with a single adenoma (constituting 85%-90% of patients with primary hyperparathyroidism) to four-gland exploration would subject many patients to unnecessary risks.

In addition, it is arguable whether parathyroid hormone levels be monitored intra-operatively in every patient outside the study protocol, given that a patient with concordant sestamibi and ultrasonography findings of a solitary adenoma has a very high (96%-98%) chance of successful operation by targeted exploration alone.<sup>8</sup> As a corollary, routine hormone monitoring can further increase the success rate only to a very limited extent in this major category of patients.<sup>8</sup> A selective approach is proposed herein for our regional hospitals (Figure).

Finally, the real value of this otherwise excellent study has, unfortunately, not received due coverage throughout the discussion. Primary hyperparathyroidism affects predominantly older people; surgical referral is often deferred because of the perceived risks. The symptoms can be protean and elusive, yet debilitating (eg major depression, bone pain, and profound weakness). The promulgation to our physicians the message that a simplified and efficacious

operation under local or short-acting general anaesthesia is now available in our local hospitals would encourage them to look for primary hyperparathyroidism in patients with ill-defined symptoms, to lower the threshold for surgical referral, and to counsel patients to opt for the ideal treatment—all to the benefit of our rapidly enlarging geriatric population.

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