CORRESPONDENCE

Preoperative optimization in pheochromocytoma: phenoxybenzamine may be redundant but not alpha blockade

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Received: 20 November 2015 / Revised: 23 November 2015 / Accepted: 27 November 2015 / Published online: 7 December 2015
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To the Editor,

The editorial by Dr. James¹ is a long overdue commentary on the futility of adopting treatment protocols for patients with pheochromocytomas and paragangliomas. In such cases, the amount of catecholamines and their secretory pattern may lead to a myriad of clinical effects depending on the type and number of stimulated adrenergic receptors. Nevertheless, preoperative alpha adrenergic blockade remains an important part of the management in these patients. It significantly blunts the hypertensive peaks that can potentially result in major cardiovascular and neurological morbidity in the patient, not to mention anxiety in the anesthesiologist! Phenoxybenzamine has clearly lost favour in many centres caring for these patients worldwide, not because of its *unavailability*, but rather because it is difficult to titrate and leads to a pronounced incidence of profound postoperative hypotension due to its long duration of action.

In our institution, we have been using the alpha blocker, prazosin, for these patients for the last 25 years where in our 80 case experience, the patients have been preoperatively optimized for seven to ten days. We manage the preoperative preparation on an in-patient basis because our institution is a referral centre for most of Northern India, and many of our patients must travel from distant regions. Prazosin has a half-life of two to three hours and allows a dosing interval of four to 12 hr, a useful feature for tailoring the preoperative therapy.² Importantly, we also use metoprolol in most patients to curtail the reflex

tachycardia seen with preoperative prazosin and intraoperative sodium nitroprusside, our intraoperative antihypertensive agent of choice.

The incidence of postoperative hypotension is nearly 30% in our patients (unpublished data). We do not have similar data relating to phenoxybenzamine, but various other authors have reported the incidence of postoperative hypotension as more than that seen with selective alpha-1 blockers.^{2,3} Indeed, it is the non-selective alpha-blocking nature of phenoxybenzamine that is the reason for its unfavourable side-effect profile (i.e., central sedation, pronounced orthostatic hypotension, and reflex tachycardia) which is intolerable in many patients. These complications are relatively less severe with selective blockers.⁴

We agree with Dr. James in recognizing that the loss of phenoxybenzamine from our pharmacy shelves further allows a progressive step towards a more individualized “made-to-measure” preoperative therapy in these patients.

Conflicts of interest None declared.

References

1. James M. The impact of changes in drug availability for hemodynamic management in pheochromocytoma: prêt-à-porter or tailor-made? *Can J Anesth* 2015; 62: 1244-7.
2. Kinney MA, Narr BJ, Warner MA. Perioperative management of pheochromocytoma. *J Cardiothorac Vasc Anesth* 2002; 16: 359-69.
3. Prys-Roberts C, Farndon JR. Efficacy and safety of doxazosin for perioperative management of patients with pheochromocytoma. *World J Surg* 2002; 26: 1037-42.
4. Zhu Y, He HC, Su TW, et al. Selective α 1-adrenoceptor antagonist (controlled release tablets) in preoperative management of pheochromocytoma. *Endocrine* 2010; 38: 254-9.

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