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Correspondence

Additive effect of propofol for attenuation of hypertension in a patient with undiagnosed phaeochromocytoma

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EDITOR:
I read with interest the letter by Isik and colleagues [1] describing the attenuation effects of propofol in a case with undiagnosed phaeochromocytoma. Management of patients with pheochromocytoma is very challenging, especially if undiagnosed and unprepared. The use of propofol in this case is very logical. Propofol has vasodilator properties, readily available and easy to administer. The hypotensive effect seen was most probably due to potentiation of the effects of other vasodilator drugs. As to the other medication used in this case, I would like to make few comments.

The use of beta blockers is not a favourable option when phaeochromocytoma is suspected in a non-prepared patient. This is because of the risk of unopposed alpha vasoconstrictor stimulation that could be precipitated by removal of the beta vasodilator effects. In addition, it is important to maintain good cardiac contractility after resection of the tumour, which can be jeopardized by beta blockers [2].

Two important drugs were omitted in this case: phentolamine, a short-acting alpha blocker, and magnesium sulphate, which inhibits the release of catecholamine from the adrenal medulla, decreases the sensitivity of alpha receptors and causes direct vasodilatation [3,4]. Both drugs are useful in hypertensive crises secondary to phaeochromocytoma and can be given peripherally and rapidly.

Hypertensive complications in patients with phaeochromocytoma may arise suddenly, especially in unprepared cases. I emphasize on the importance of the use of alpha blockade and magnesium sulphate in undiagnosed cases of phaeochromocytoma. I agree with the authors about the useful attenuating antihypertensive effects of propofol in hypertensive crises. Further research into propofol effects and phaeochromocytoma may be needed.

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Reply

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EDITOR:
We thank Dr Fassam for his interest in our study and his comments [1]. We agree with him that the use of beta blockers is not a favourable option and has limited indications during arrhythmias in case of phaeochromocytoma. In our case, during surgery both beta-blocker drugs were selected to control aggravated hypertension of the patient who had regulated hypertension before surgery. The diagnosis of phaeochromocytoma was not suspected at that time. So we agree with Fassam that beta

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blockers, unfortunately, might have contributed to the severity of hypertensive attacks. The other recommended agent phentolamine, a short-acting alpha blocker, could not be used due to unavailability in our institution during this case.

Magnesium sulphate is routinely used to control arrhythmias and hypertension in patients undergoing cardiovascular surgery and in the Caesarean section of preeclamptic patients or ICU patients. However, magnesium sulphate is not the first drug of choice to control hypertension in other surgical procedures. First a vasodilatory drug treatment including nitroglycerine, nitroprusside, calcium-channel-blockers or beta blockers is started and subsequently other adjuvant drugs are added according to the features of the cardiovascular status of the hypertensive patients and even in some patients with phaeochromocytoma as reported by Fassam in reference 4 [2]. It appears that questions concerning the appropriate management of patients with phaeochromocytoma during surgery are increasing. In reference 4 sited by Fassam, all patients were given isoflurane. However, isoflurane was inadequate to attenuate their arterial hypertension. Hence it is not superior to propofol in this aspect and may even have a negative effect to prevent intracranial pressure increase in severe hypertensive crises. In our case, single bolus following infusion of propofol dramatically decreased arterial pressure. The effect of propofol on blood pressure seems to be an additive effect to vasodilator treatment used previously. We agree about the comments on magnesium sulphate. If we consider the effects of propofol and magnesium sulphate on the cardiovascular system, a further choice might be the combination of propofol and magnesium sulphate to manage hypertensive crisis of patients having phaeochromocytoma, perhaps without alpha blocker treatment. A better attenuation of cardiovascular responses can be obtained because of their potentiation of each other.

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Recombinant factor VIIa in massive obstetric haemorrhage

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EDITOR:
A 38-yr-old ASA I, gravida 2 para 1, with a history of previous lower segment Caesarean section (LSCS) for breech presentation was scheduled for an elective LSCS in this pregnancy. The latest ultrasound, which was performed at 32 weeks, demonstrated an anterior grade III placenta praevia. The patient was very keen to proceed under spinal anaesthesia with full understanding of the likelihood of increased risk of bleeding and the need for transfusion of blood and conversion to general anaesthesia.

The baby was delivered in good condition via the placenta. The placenta was found to be strongly adherent to the uterine wall and was removed in a piecemeal fashion. Torrential bleeding ensued, requiring rapid administration of colloid, blood and blood products via a rapid infuser along with pharmacological treatment to enhance uterine contraction and stop bleeding. During the course of resuscitation, general anaesthesia was induced with Ketamine and Suxamethonium and invasive monitoring was instituted with a view to proceeding to hysterectomy. The uterus was found to be adherent to the bladder and a subtotal hysterectomy was performed with repair of bladder. It was estimated that approximately 22 L of blood loss occurred. The patient required 29 units of packed red blood cells, 8 units of Fresh Frozen Plasma, 3 pools of platelets, 3 pools of cryoprecipitate, 2.5 L of crystalloid and 4.5 L of synthetic colloid (starch and gelatin) with no achievement of haemostasis. At this point, after discussion with the consultant haematologist, a bolus of 7.2 mg of rFVIIa was given intravenously despite the pH being 7.19 on arterial blood gas monitoring. The results were dramatic in terms of both successful haemostasis of the surgical field and ongoing fluid resuscitation requirements. Post operatively the patient was nursed in the intensive

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