

Successful administration of unilateral spinal anaesthesia in a patient receiving dual anti-platelet therapy under platelet transfusion cover

Sir,

In today's era, the global burden of ischaemic heart disease has increased, leading to a parallel increase in the number of such patients presenting in emergency operating rooms (EORs). Though spinal anaesthesia (SA) is commonly administered to patients with a history of cardiac disease including parturients in elective areas, the risk

of development of paraplegia associated with the use of dual anti-platelet therapy (DAPT) limits its use in emergency situations.^[1-3] Here, we share our experience of successful administration of SA for emergency lower limb surgery, in a patient receiving DAPT under platelet transfusion cover.

An elderly female with uncontrolled hypertension and a history of ischaemic coronary event, 6 months ago, presented in the emergency room with complaints of shortness of breath and acute pain in left leg. She was found to have dilated cardiomyopathy with severe left ventricular dysfunction. She was started on daily DAPT including aspirin 150 mg and clopidogrel 75 mg. Upon management of her acute cardiac condition, the acute leg pain was evaluated, which revealed non-viable muscles with arterial occlusion. An above-knee amputation with stump thrombectomy was planned.

The patient belonged to the American Society of Anesthesiologists physical status-IV with a revised cardiac risk index score of 4/6. She was likely to require postoperative mechanical ventilatory support if general anaesthesia was administered. In the time of the raging coronavirus disease (COVID)-19 pandemic, mechanical ventilators are being mobilised to the COVID-19 units and hence have become a scanty resource.^[4] Upon counselling the patient about the risks and benefits associated with both the techniques and the possible non-availability of a mechanical ventilator in the postoperative period, it was decided to administer a single-shot, low-dose, unilateral subarachnoid block.

All the necessary rescue devices were kept ready in the EOR. Standard monitors were attached to the patient and oxygen was administered by venturi mask. Two units of random donor platelets were transfused to the patient via an intravenous catheter. Following the transfusion, an arterial catheter and a central venous catheter were placed. The patient was placed in the left lateral position, and under all aseptic precautions, SA was administered with 1.6 mL of 0.5% heavy bupivacaine and 0.4 mL of 0.05% fentanyl using a 26-gauge spinal needle. The patient was kept in lateral position for 15 min for the drug to get fixed and the level of surgical anaesthesia was confirmed to be unilateral up to T11–T12 spinal level. The intraoperative course was uneventful except for vasodilatory hypotension which was managed by titrating doses of noradrenaline infusion. The vasopressor was tapered off by the end of the surgery. The patient was followed up and there was no residual neurological defect.

There has been an increase in the number of patients getting treated with DAPT reaching the EORs. Herbstreit *et al.*^[5] reported successful administration of SA in a patient receiving DAPT under platelet transfusion cover, but no formal guidelines exist for the acute reversal of these agents. Various study groups have tried to bridge this lacuna. Thiele *et al.*^[6] have recommended transfusion of two units of platelets before major surgery in patients receiving DAPT and the French working group on perioperative haemostasis has proposed an algorithm-based approach for the reversal of anti-platelet therapy for non-elective invasive procedures which includes

transfusion of platelets after 6 h of last administration of DAPT.^[7] However, there is a need for further research regarding the safe administration of SA in this population in the EORs.

The administration of anaesthesia needs to be tailored to suit the best interests of the patient. The risk–benefit ratio of the available options needs to be discussed with the patient before making the choice of anaesthesia. Here, we tried to reconsider the traditional concept of complete avoidance of SA in patients receiving DAPT. Nevertheless, the technique can be used after acute reversal of anti-platelet drugs by platelet transfusion in selected cases.

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Conflicts of interest

There are no conflicts of interest.

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