Original Research Paper



# PERIPHERAL VASCULAR DISEASE SEVERE CARDIAC DYSFUNCTION AND UNILATERAL LIMB BLOCKS: A CASE REPORT

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ABSTRACT This case report describes an elderly woman with history of chronic smoking, presented with lower limb pain, later diagnosed with acute limb ischemia and dry gangrene right foot with ejection fractions of 30%, DCM and severe LV dysfunction. The patient was managed with unilateral lower limb sciatic and femoral nerve blocks for guillotine amputation, and later discharged.

KEYWORDS : Peripheral vascular disease, ejection fraction, dilated cardiomyopathy

## INTRODUCTION

Peripheral vascular disease specifically atherosclerotic disease leading to peripheral artery obstruction, may be silent or present with a variety of symptoms and signs indicative of extremity ischemia. The clinical manifestations of arterial insufficiency (regardless of etiology) are due to a lack of blood flow to the musculature relative to its metabolism, which results in pain in the affected muscle groups.

The presence of an extremity ulcer is one of the more obvious clinical signs that can be due to ischemia, but other manifestations, such as claudication and rest pain, should be actively sought out and differentiated from nonatherosclerotic and nonvascular conditions to ensure timely intervention. When recognized early and appropriately managed, complications that can lead to limb loss can be minimized.

### **Case report**

A 64-year-old female, chronic smoker presented with complaints of pain in both lower limbs, which was sudden onset, severe in intensity, and not relieved with analgesia. The patient was not able to stand or do routine household activities.

On examination, there was swelling and blackening of the right foot, and digital pulse was absent with numbness and decreased sensation of lower limbs.

CT angiography bilateral lower limb vessels revealed calcified plaques in internal iliac artery and distal segment with narrowing of lumen up to 90% on both sides of internal iliac arteries.

Doppler examination revealed soft and calcified plaques occluding 30% of lumen of supra and infra-renal aorta.

Echocardiography revealed dilated cardiomyopathy (DCM), LV dysfunction with ejection fraction of 30%.

The patient was diagnosed with peripheral vascular disease with dry gangrene right foot. Plan of forefoot guillotine amputation was made as a life-saving surgery.

The patient was shifted to operation room after preanaesthetic examination. All standard monitoring attached with additional intra arterial BP (IABP) monitoring. Two wide bore cannulas were taken. Sciatic nerve block was done with Labat's technique. Additionally, femoral block was done with 23-gauge Quincke spinal needles with plain bupivacaine.

The patient remained haemodynamically stable and comfortable during surgery.

### DISCUSSION

Anaesthesia may influence the incidence of deep venous

thrombosis (DVT) and also, possibly, pulmonary thromboembolism (PTE). General anaesthesia has been known for many years to reduce lower limb blood flow by about 50%.<sup>12</sup> However, although in theory positive pressure ventilation should worsen the situation by further impeding venous return, this has not been shown to increase either incidence of DVT or overall mortality.<sup>3</sup>Subarachnoid block produce vasodilatation of the lower limbs. A study hashas shown increased arterial inflow and venous emptying rate associated with extradural block.<sup>5</sup> It is likely that not only vasodilatation but also a reduction in blood viscosity are important in this situation. Spinal anaesthesia tends to produce a greater degree of cardiovascular depression as demonstrated by greater fall in mean arterial pressure, cardiac output, and heart rate.

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In this case, we had LVEF of 30% and rare LV dysfunction. We approached unilateral lower limb block to maintain haemodynamic stability.

## CONCLUSION

Unilateral lower limb blocks can prevent severe hypotension and bradycardia, and use of vasopressors.

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