Introduction: COVID-19 has brought in the foreground the benefits of regional anaesthetic techniques as the preferred method of anaesthesia when possible. While there are many case reports of peripheral nerve blocks successfully used during the pandemic, to our knowledge this is the first case report of the use of regional anaesthesia for peripheral limb surgery for high risk deaf and mute COVID-19 contact patient and challenges one encounters in patients with this disability.

Case Presentation: A 65-year-old man presented as an emergency with critical left lower limb ischaemia. Initially a left common femoral and profunda femoris endarterectomy were performed under general anaesthesia that led to unplanned admission to the HDU for vasopressor support due to persistent hypotension. Following the initial procedure, his symptoms failed to improve, with ongoing forefoot pain and signs of infection. The decision was made to proceed to a forefoot debridement that was successfully performed under peripheral nerve block and patient discharged back to the ward without any peri-op complications.

Conclusion: In this case report we describe the use of regional techniques to facilitate the emergency procedure with a view to minimising risk to the patient with a previous history of requiring prolonged vasopressor support and unplanned HDU admission after general anaesthesia. His status as a COVID-19 bay contact and as a high risk deaf and mute patient where communication is an issue make this an interesting case.

Keywords: COVID-19; Regional anaesthesia; Forefoot amputation; Contact positive; Deaf and mute.

Introduction
The COVID-19 pandemic has changed the way we provide anaesthesia for our patients, undergoing both emergency and elective surgery. While regional anaesthetic techniques have been gaining popularity over the last few years, they have been mostly used as an analgesic adjunct. Within few months into the pandemic, both the American Society of Regional Anaesthesia (ASRA) and the European Society of Regional Anaesthesia and Pain Therapy (ESRAPT) published practice recommendations regarding the benefits of using regional anaesthesia as first line in patients with COVID-19 [1]. These guidelines were soon followed by similar recommendation from the Royal College of Anaesthetists and the Association of Anaesthetists of Great Britain and Ireland [2], citing the advantage of regional anaesthesia in not being an aerosol generating procedure as compared to general anaesthesia with endotracheal intubation and hence it’s safety. Patients with peripheral vascular disease fall within the high risk category for severe complications of COVID-19, due to their frequent and multiple comorbidities. Most of these patients have cardio-respiratory comorbidities due to smoking that puts them in the high risk group for COVID related post-op morbidity and mortality. In this case report, we describe the use of an ultrasound guided popliteal and sciatic nerve block in a deaf and mute patient who though himself been COVID negative, was in a four bedded bay with a confirmed COVID positive case. He required an emergency forefoot amputation and had been on the emergency list for 48 hrs. We will also describe our plan to be able to communicate with the patient for the duration of the operation in the absence of his British Sign Language (BSL) interpreter who could not be allowed in the operation theatres as per the department policy.

Case report
A 65-year-old man was transferred from another hospital as an emergency to our vascular unit. He initially presented to the vascular clinic with symptoms of critical limb ischaemia, manifesting as rest pain and associated skin changes. He had a significant medical history of peripheral vascular disease...
(including a previous right lower limb bypass, complicated by an unplanned High Dependency Unit admission for Type 1 respiratory failure post-operatively), ischaemic heart disease with unstable angina, suspected TIA, hypertension and chronic pancreatitis. He was also a lifelong smoker, with a likely element of undiagnosed COPD. As he was deaf and mute, he was only able to communicate through lip reading or by using a BSL interpreter.

Following his admission to our hospital, he was treated with antibiotics for nine days, while his procedure was planned. On day ten of his admission, he underwent a left common femoral and profunda femoris endarterectomy under general anaesthetic. Intraoperatively he required frequent boluses of metaraminol to maintain his blood pressure. In the immediate post operative period, he remained hypotensive and had to be started on a vasopressor infusion (metaraminol). This significantly prolonged his recovery and he had to remain in our recovery area overnight. On the following day, he was still hypotensive, requiring metaraminol to maintain a MAP > 75 and hence he was referred to HDU and later admitted there. Over the next few days he was slowly weaned off the vasopressor infusion and was stepped down to the ward.

Following the initial revascularisation surgery, his symptoms did not improve. His left foot remained painful and ischemic, with progressive skin changes and increasing inflammatory markers, the decision to proceed with a foot amputation was made. Due to pressures in the emergency theatre, there was a delay of 48 hrs between the time the decision was made to return to theatre, and the actual operation. During this 48 hrs wait, one of the other patients in the bay where he was admitted, tested positive for COVID-19. It is the hospital policy that bay contact patients are treated as COVID-19. It is the hospital policy that bay where he was admitted, tested positive for COVID-19. It is the hospital policy that bay contact patients are treated as COVID-19. It is the hospital policy that bay where he was admitted, tested positive for COVID-19. It is the hospital policy that bay where he was admitted, tested positive for COVID-19. 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use of block teams comprising of anaesthetists with proficiency in regional anaesthesia during COVID times in patients where surgery can be performed purely regional techniques. Regional anaesthesia should be considered as first option in cases where it is possible to conduct surgeries under nerve blocks or neuraxial anaesthesia, it should become the norm rather than exception [5].

**Conclusion**

Regional anaesthesia, including peripheral nerve blocks, are an important tool in an anaesthetist’s armamentarium. This is increasingly true in the light of a respiratory virus pandemic. With this case we have demonstrated how using a regional technique can improve patient outcomes as well as improve the safety of the healthcare personnel involved. Careful planning and communication ensured the success of the procedure and a good outcome for our patient. Moving forward, and as our collective experience with regional techniques increases, it is reasonable to expect that the recommendations to prefer those over general anaesthesia when feasible will persist.

**References**


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