

## Meralgia paraesthetica following total knee arthroplasty

Sir,

Meralgia paraesthetica (MP) after total knee arthroplasty (TKA) is extremely rare and has not been reported previously to the best of our knowledge. Recently, we encountered two such cases where both patients were elderly females aged 72 yrs and 68 yrs who were suffering from MP-like symptoms almost immediately after TKA surgery. Both had their surgery under spinal anaesthesia and post-operative continuous femoral nerve block for 72 hr. Their intra-operative course was unremarkable. Both had severe burning pain and allodynia over anterolateral thigh. Initially, both were treated conservatively with analgesics and anti-neuropathic medications (pregabalin). After failed conservative treatment, they were treated with ultrasound-guided lateral femoral cutaneous nerve (LFCN) block with 5 mL of 1% lidocaine and 20 mg triamcinolone. Both had near-complete pain relief.

The superficial location of the LFCN makes it vulnerable for injury, compression or direct surgical insult. Since the surgical site is well away from the LFCN during TKA, direct surgical insult was ruled out. We evaluated for other risk factors in both patients. One patient was diabetic but with controlled blood glucose levels. None of them were morbidly obese, did not give a history of hypothyroidism, use of tight belts or corsets, as these are the risk factors.<sup>[1]</sup> Since both patients developed symptoms following TKA, a co-incident development was unlikely and was strongly pointing towards a causal relationship.

Neuraxial anaesthesia as a cause for MP-like symptoms has been reported by Shin HJ *et al.* where the patient developed symptoms in the limb opposite to the operated one.<sup>[2]</sup> The authors attributed it to compression of the L3 nerve root by epidural local anaesthetic infusion. In both our cases, review of their anaesthesia records and history showed that they did not experience any paraesthesia or shock-like sensation during the administration of the subarachnoid block. Neither of the patients received epidural anaesthesia.

Another possibility is, LFCN injury during in-plane (and not out-of-plane) femoral perineural catheter insertion from lateral to medial direction for continuous

postoperative analgesia. This is possible as cadaver studies have shown the LFCN or its branches running in the connective tissue overlying the femoral triangle in about 16.6% of cases.<sup>[3]</sup> Anaesthesia records of both the patients revealed that the catheter was inserted out of plane, ruling out block needle induced LFCN injury.

Tourniquet induced nerve palsy is a well-known entity and in the lower limb, sciatic and femoral nerves are the most affected nerves. Injury to LFCN by tourniquet has not been reported. However, in both our cases, tourniquet was not used, thus eliminating this possibility.

There are reports of MP-like symptoms in parturients who delivered in the lithotomy position.<sup>[4]</sup> The risk factors in these patients are increased intra-abdominal pressure due to pregnancy and labour, lithotomy position where the LFCN gets compressed due to prolonged hip flexion. This is supported by another report, where the patient's meralgia symptoms are aggravated in a sitting position and by hip flexion.<sup>[5]</sup> In our centre, TKA surgery is performed with the knee and hip flexed throughout the procedure and the procedure lasts usually for about 90 minutes. We are not sure whether hip flexion for such duration is sufficient to cause meralgia symptoms but it is the only risk factor that could explain the symptoms of MP in both our cases.

In conclusion, we report two cases of MP unusually developing following TKA surgery. Prolonged flexion of the hip during the surgery could be a possible risk factor. Hence, the change of knee position from flexion to moderate extension with a pillow beneath may eliminate compression of LFCN.

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### Conflicts of interest

There are no conflicts of interest.

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