NEW ANTINOICEPTIVE CURCUMINOID EFFECTS ON PAIN
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Purpose/Objective: Curcumin, the active ingredient of turmeric (Curcuma longa), has a wide range of beneficial effects including anti-inflammatory and analgesia. However, poor bioavailability of curcumin hinders its clinical application. To overcome this limitation, we modified the structure of curcumin and synthesized new derivatives having more favorable pharmacokinetic profiles than curcumin. Recently, curcumin shows the antagonizing effect on TRPV1 ion channels. We investigated the antinoceptive activity of KMS4034, which had the most favorable pharmacokinetics among the tested curcumin derivatives.

Materials and Methods: To evaluate the mechanism of the antinoceptive effects of KMS4034, capsaicin (L,628+) and heat (L,62) induced currents in TRPV1 expressing HEK293 cells were observed following application of KMS4034. Nociceptive behavioural measurement in hot plate test, formalin test and chronic constriction injury (CCI) model were evaluated in mice to observe various pain conditions. Also, calcitonin gene-related peptide (CGRP) was immunohistochemically stained in the L4/S dorsal horns in neuraphetic pain mice.

Results: L,628+ and L,62 of TRPV1 were significantly blocked by 10 μM KMS4034. Behaviourally, noticeable antinoceptive effects after 10 μg/kg of KMS4034 treatment were observed in the hot plate test and the formalin test. Mechanical threshold of 10 μg/kg of KMS4034-treated group was significantly increased in the CCI model compared to the control group. Immunohistochemical CGRP expression was decreased in the lamina I-II of the lumbar dorsal horns in KMS4034-treated CCI mice compared to the control.

Conclusions: KMS4034 may be an effective analgesic for various pain conditions.

THE EFFECTS OF PROPOFOL SEDATION ON OXIDATIVE STRESS AND ISCHEMIA-REPERFUSION INJURY IN TOTAL KNEE REPLACEMENT
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Purpose/Objective: We aimed to show the effect of propofol sedation in addition to spinal anesthesia on oxidative stress and inflammation resulting from ischemia-reperfusion.

Materials and Methods: Thirty-six patients were randomly allocated to two groups as Group control and Group propofol after having obtained the written informed consents of the patients and ethics committee approval. Spinal anesthesia was administered to both groups with 15 mg of bupivacaine. While the propofol group received propofol infusion at a dose of 2 mg/kg/h, the control group received placebo infusion in an equal dose. Malondialdehyde (MDA), superoxide dismutase (SOD), and the total antioxidative capacity (TAC) levels were measured in blood samples preoperatively (T0), at the 30th min after inflating the tourniquet (T1) and at 2nd hour after deflating the tourniquet (T2). The hsCRP (High sensitive c-reactive protein) and the neutrophil levels were measured preoperatively (T0) and at the 12th hour after deflating the tourniquet (T3).

Results: While the serum MDA and SOD levels were significantly higher during the reperfusion period than the pre-ischemic period, the TAC level was found to be low in the control group. In the propofol group, there was no difference between the pre-ischemia-reperfusion periods with regard to the MDA, SOD and the TAC levels. The neutrophil and hsCRP levels were observed to be increased to a lower extent in the propofol group compared to the control group.

Conclusions: Propofol infusion in addition to spinal anesthesia may reduce oxidative damage and the inflammatory response developing due to the tourniquet in total knee replacement surgery.

IN AND EX Vivo VALIDATION OF A NOVEL TECHNIQUE FOR RADIOFREQUENCY DERIVATION OF THE DORSAL SACROILIAC JOINT - INCLUDING A CASE STUDY
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Purpose/Objective: A technique was developed for radiofrequency (RF) ablation of the L5 dorsal ramus (L5DR) and SI-3 lateral branches (LBs) making use of a novel (FDA approved Numbus Multi-tined Expandable Electrode) RF electrode.

Materials and Methods: The typical distance between lateral walls of adjacent SI-3 foramina is 18–22mm. Tissue coagulation in chicken breast using Numbus electrodes in bipolar configuration with 20mm gap (and in vivo simulation with 37 C water bath) was observed thermographically. A
A POSTPARTUM HEADACHE: SUBTCLE SIGNS WITH A SERIOUS CAUSE
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Purpose/Objective: Diagnosing the cause of a postpartum headache can be complex and unclear. We report a case of isolated cortical vein thrombosis (ICVT) where the patient’s subtle symptoms and signs were initially attributed to a post-dural puncture headache (PDPH). Clinical vigilance and appropriate imaging helped elucidate the serious underlying pathology.
Materials and Methods: A multiparous 26 year old was admitted to delivery suite at full term in labour. Despite a history of three previous Caesarean sections she had declined elective Caesarean section. Slow progress led to a decision to perform a Caesarean section using a combined spinal and epidural anaesthetic technique. Surgery proceeded uneventfully and the patient was discharged two days later.
Results: Ten days post-delivery the patient presented with photophobia and an atypical postural headache. Computed tomography and cerebrospinal samples were unremarkable. Following the development of unilateral radiculopathy and then a seizure, magnetic resonance imagery (MRI) confirmed an ICVT.

Conclusions: ICVT is an extremely uncommon condition, with an incidence of 10–20 per 100,000 deliveries. It is an important cause of maternal mortality. Predisposition to ICVT includes ongoing dural leak following central neuraxial anaesthetic techniques. Diagnosis is by MRI and MR venography which should be performed at the earliest opportunity to prevent the development of potentially life-threatening or life-changing injury. If a PDPH is diagnosed but the patient displays additional symptomology, this approach should be undertaken.


COMPARISON OF GENERAL WITH SPINAL ANAESTHESIA FOR CESAREAN DELIVERY IN PREECLAMPTIC PARTURIENTS: NEONATAL OUTCOME
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Purpose/Objective: To compare neonatal status following general with spinal anaesthesia in preeclamptic parturients.

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