EXPERIENCES WITH ENDOSCOPIC DISCECTOMY OF THE HERNIATED INTERVERTEBRAL DISC IN THE CZECH AND SLOVAK REPUBLIC FOCUSED ON CHANGES IN THE QUALITY-OF-LIFE EQ-5D-5L ANALYSIS

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Herniated lumbar discs are a common cause of low-back pain and decreased quality of life, especially in the productive age population. Currently, in addition to the classic open discectomy, minimally invasive percutaneous endoscopic lumbar discectomy (PELD) is also a valid treatment option. This study was aimed to assess changes in the quality of life after PELD in patients with sciatica in the Slovak and Czech republic.

The study included 470 patients who underwent transforaminal, interlaminar or translaminar endoscopic discectomy. Evaluation of changes in pain perception and quality of life was made by comparing statistical weight values in EQ-5D-5L, quality of life (EQ-VAS), Oswestry disability index (ODI), and numerical scales of leg pain and back pain grading questionnaires before the endoscopic surgery and 12 months after.

Comparison of ODI, EQ-VAS and numerical pain scales showed a significant improvement in the reduction of back pain and leg pain. All evaluated dimensions of the EQ-5D-5L questionnaire indicated a significant improvement in the assessed quality of life (p <0.001).

Outcomes of assessments of the quality of life via selected questionnaires showed that the efficacy of PELD is comparable to any type of open spine surgery. In addition, patients after PELD showed no signs of surrounding muscular tissue damage on postoperative MRIs. By comparing transforaminal, interlaminar or translaminar approaches, we did not observe any differences between different surgical techniques and no difference in the percentage of postoperative complications or re-herniation rates.

UGRA FOR PUDENDAL NERVE BLOCK: A CHALLENGING BLOCK - WHAT CAN WE LEARN FROM THE PROS?

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Chronic Pelvic Pain is classified as Chronic Primary Pelvic Pain with no obvious diagnosis & Chronic Secondary Pelvic Pain with well recognized pathology (ICD 11)

Pudendal neuralgia is classified under chronic secondary pelvic pain

The main indication for Pudendal nerve block is pudendal neuralgia. The diagnosis of pudendal neuralgia is primarily clinical in the absence of biochemical, imaging and electro diagnostic criteria

Aetiology of pudendal neuralgia include Pudendal nerve entrapment (most frequent)

The other causes described include Post-surgical neuropathy, Stretch neuropathy, Peripheral polyneuropathy & Postradiotherapy neuropathy

Pathogenesis of pudendal neuralgia involves compression of the pudendal nerve at the level of the sacrosymphysis/sacro-tuberous ligaments, possibly accounting for 42% of cases & within Alcock’s canal (medial to the obturator internus muscle, within the fascia of the muscle), possibly accounting for 26% of cases. Cycling, and to a lesser extent horse riding have been reported as the most common causes of PN with repeated impacts generate high perineal pressure

Essential Criteria (Nantes) for the diagnosis of Pudendal nerve entrapment syndrome or Compressive pudendal neuralgia, 5 criteria and they all must all be present. Pain in the distribution of the pudendal nerve from the anus to the penis or clitoris, Pain predominantly experienced while sitting, Pain does not wake the patient at night, No objective sensory impairment & Pain relieved by diagnostic pudendal nerve block

Anatomy Pudendal nerve is the main nerve of the perineum, the pelvic floor muscles and the external genital organs. The nerve arises from the primary ventral rami of s2, s3 & s4 sacral plexus. It consists of sensory, motor & autonomic fibres. somatic fibres. The nerve divides into three, inferior rectal nerve, perineal nerve & dorsal nerve of the penis/clitoris.

The perineal nerve emerges from the pelvis through the greater sciatic foramen in a caudal course and it re-enters the pelvis through the lesser sciatic foramen, between the sacrospinous & sacrotuberous ligaments. It is in the inter-ligamentous part of its course where compressive nerve pathologies may be often found & also the course through Alcock’s canal has been described as one of the most susceptible areas for nerve entrapment. The internal pudendal blood vessels are also found along the course of the pudendal nerve & this is extremely helpful in identifying the nerve with colour doppler. At the level of the ischial spine the internal pudendal artery is found lateral to the nerves in majority of cases.

Technique Pudendal nerve blocks may be performed by two approaches: anterior-perineal or posterior-trans gluteal. The perineal approach is used for distal entrapments or for analgesia in gynaecological surgery. The posterior approach has been used for proximal nerve entrapment syndrome. Approaches for pudendal nerve blocks include Anatomical landmarks, Neuromodulation, Fluoroscopy, Tomography & Ultrasound guidance.

Ultrasound guided trans gluteal posterior approach: the protocol consists of informed consent, monitoring, asepsis, lateral decubitus or in prone position. Once the settings are adjusted and the image optimised, a curved transducer is used for proximal nerve entrapment syndrome. Approaches for pudendal nerve blocks include Anatomical landmarks, Neuromodulation, Fluoroscopy, Tomography & Ultrasound guidance.

Ultrasound guided trans gluteal posterior approach: the protocol consists of informed consent, monitoring, asepsis, lateral decubitus or in prone position. Once the settings are adjusted and the image optimised, a curved transducer is placed initially in a transverse plane across the proximal gluteal area and then moved caudally.

The following structures need to be recognised, from proximal to distal

Transducer’s position 1: posterosuperior iliac spine & illeum,
Transducer position 2: greater sciatic foramen, Ischium, piriformis muscle, sacral plexus, superior gluteal artery and deep bowel movement may be recognised.

Transducer’s position 3: the ischial spine must be recognised as a straight hyperechoic line, the sacrospinous ligament as a continuation of the hyperechoic line of the ischial spine & sacrotuberous ligament, superficial and parallel to the sacrospinous ligament, deep to the gluteus maximus. Laterally the superior gemellus muscle, the sciatic nerve and the inferior gluteal artery. With the transducer in this position, on the medial edge of the image, identify internal pudendal artery and the pudendal nerve, found in the interfascial plane medial to the pudendal vessels in most cases. The transducer should be moved until the pudendal neurovascular bundle appears in the centre of the ultrasound image.

Transducer in position 4: the transducer is moved more caudal to the ischial spine to enter the lesser sciatic foramen, at the level of obturator internus & ischial tuberosity for entry point to Alcock’s canal. Pudendal neuro vascular bundle is identified with colour doppler.

In transducer positions 3 & 4 the puncture will be made in-plane from medial to lateral using a short-bevel 80–100mmx 22G needle. Sensory or motor neurostimulation may be used in the proximity of the nerve in order to determine the presence of paraesthesia/motor contraction in the territory of the pudendal nerve. Local anesthetic & corticosteroid is used in a volume ranging from 4 to 6 mis with negative aspiration.

Complications Although the reported rate of complications is low, they may still occur, and they include pudendal nerve injury, vascular injury, intravascular injection, muscle weakness in the sciatic nerve territory, muscle pain, urinary or faecal incontinence and numbness in the pudendal nerve area.

Conclusions A detailed knowledge of the pudendal nerve anatomy and its variants is essential for the use of ultrasound guided pudendal nerve block. Ultrasound with use of colour deep has shown to be of significant help in performing this procedure safely.

REFERENCES

SP56 PSYCHEDELIC DRUGS AND PAIN
M Rekatsina, E Moka, A Vadoulouca, G Varrassi. Living with pain significantly impacts a person’s quality of life and ability to work. Existing therapies carry several unwanted side effects, can lead to dependence or lack efficacy for many individuals. Additionally, many existing treatments fail to adequately address the psychological impact of chronic pain conditions, leading to growing numbers of patients seeking alternative treatments and experiment with self-treatment.

Ketamine, a non-competitive NMDA inhibitor with significant psychedelic properties, is widely used in the management of acute and chronic pain. Ketamine is used intraoperatively to spare opioids and prevent acute and chronic postoperative pain; it is also used in patients with complex pain syndromes and patients with opioid tolerance. Medical cannabis is already used widely in many countries to control pain and other conditions. Recently, psychedelic drugs like lysergic acid diethylamide (LSD), psilocybin, ecstasy (3, 4-methylenedioxy-N-methylamphetamine or MDMA), ayahuasca, DMT (dimethyltryptamine) and others have regained a significant place among research and medical scientific talks for their therapeutic potential in pain management.

Historically, there has been interest in using psychedelics to treat chronic pain since 1960s where it was suggested that psychedelic drugs may be therapeutically useful in cancer and phantom limb pain, but due to lack of the methodological rigor of modern trials they haven’t gained much attention. Recent studies suggest that psychedelics may be therapeutically useful in treating intractable headaches such as migraine and cluster headaches, and few recent reviews hypothesize potential mechanisms and applications for psychedelics in chronic pain. Pharmacologically, this concept is plausible. The primary mechanism of action of classic psychedelics is via the 5-HT2A serotonin receptor, which is integral to descending inhibitory pathways. The effects of psychedelics may also contribute toward an analgesic response by reorienting attention away from unpleasant sensations toward altered perceptions, e.g., visual hallucinations.

Despite the great interest and possibilities, the current legal status of many psychedelic drugs poses a hinder to obtaining robust research evidence regarding their effectiveness and safety profile.


