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Audit of Pain Scores Post Nasal Surgeries

Samir Gendy*

Consultant ENT Surgeon, Emersons Green and Devizes practiceplus group Hospitals, UK

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***Corresponding author:** Samir Gendy, Consultant ENT Surgeon, Emersons Green and Devizes practiceplus group Hospitals, UK

INTRODUCTION

A study was conducted to measure patients pain scores post nasal surgeries performed at both Emersons Green and Devizes Practice plus Hospital during the months of October and November 2024 Lignospan injection is commonly used in nasal surgeries as a local anaesthethic and decongestant prior to nasal surgical procedure.

Lidocaine stabilizes the neuronal membrane by inhibiting the ionic fluxes required for the initiation and conduction of nerve impulses, thereby effecting local anesthetic action.

Each lignospan cartridge is a 2.2ml solution for injection that contains 44mg of lidocaine hydrochloride and 27.5micograms of adrenaline so each 1 ml contains 20mg of lidocaine hydrochloride and 12.6micrograms of adrenaline (1:80,000) For normal healthy adults, the amount of lidocaine HCl administered should be kept below 500 mg, and in any case, should not exceed 7 mg/kg (3.2 mg/lb) of body weight) Studies of lidocaine metabolism following intravenous bolus injections have shown that the elimination half-life of this agent is typically 1.5 to 2.0 hours LIGNOSPAN is contraindicated in patients with a known history of hypersensitivity to local anesthetics of the amide type or to any components of the injectable formulations Lidocaine should be used with caution in patients with severe shock or heart block. Lidocaine should also be used with caution in patients with impaired cardiovascular function. Local anaesthetic solutions containing a vasoconstrictor should be used with caution in areas of the body supplied by end arteries or having otherwise compromised blood supply. Patients with peripheral vascular disease and those with hypertensive vascular disease may exhibit exaggerated vasoconstrictor response. Ischemic injury (such as exfoliating or ulcerating lesions) or necrosis may result. Preparations containing a vasoconstrictor should be used with caution in patients during or following the administration of potent general anaesthetic agents, since cardiac arrhythmias may occur under such conditions.

MATERIALS AND METHODS

During the months of November and December 2024 all patients having nasal surgery was a handed a visual pain analogue score card to mark their pain score 3 hours postoperatively to make sure that effect of local anaesthetic agents have weaned off. A total of 16 patients were enrolled into this audit at both Emersons Green and Devizes practiceplus group hospitals. The demographic characterstic of this cohort of patients includes 13 male patients and 3 female patients of which the oldest patient age was 76 yrs. old and the youngest was 28. 10 patients had Endoscopic sinus surgery procedures while 3 patients had septoplasty and 3 patients had Turbinoplasty surgical

procedures. All patients had surgery under General anaesthesia All patients were given midazo lam as predominant sedative by anaesthetist along with fentanyl as predominant opioid analgesic before surgery.

All patients had absorbable (nasopore) nasal packs. In recovery room post-operatively systemic pain therapy was given by diclofenac as non-opioid and tramadol as opioids was used. Pain score ranges from a minimum of 0 to a maximum of 5 was recorded 3 hours' post-surgical procedure with a mean pain score of 1.

DISCUSSION

Postoperative pain can be a mixture of inflammatory and neuropathic pain, often presenting as an increased sensitivity to pain and can lead to significant morbidity and slow patient recovery after surgical procedures

Preoperative pain therapy counselling and postoperative specific pain related counselling has been an important prognostic factor driving postoperative anxiety, postoperative depression, pain, and effects of postoperative pain on patient's mental well-being reduced significantly.

Local anaesthetic rhinological surgery has been performed around the world for decades. In the United Kingdom (UK) most rhinological procedures are performed under general anaesthetic (GA) with local anaesthetic (LA) often reserved for those unable to undergo a GA. A number of factors including patient choice, improvements in surgical instrumentation and inpatient waiting times has led to UK rhinologists re-evaluating the possibility and ease with which rhinological procedures can be performed under LA, Furthermore, a recent a survey by the American Rhinological Society showed that 77% of respondents performed LA polypectomies and 35% performed office-based LA functional endoscopic sinus surgery (FESS) (Lee 2019).

There are a number of centres in the United Kingdom performing an increasing number of rhinological procedures under LA. The British Rhinological Society (BRS) recognised the need to develop standards for local anaesthetic nasal surgery and with BRS Juniors, reviewed the literature to evaluate best practice at the present time.

Collective evidence for 6795 office-based FESS procedures was identified. The country with the largest proportion of office-based FESS performed was the USA (33%), with the UK accounting for 9%. The most common sinuses operated on were the maxillary and anterior ethmoids, followed by the sphenoid (8%) and frontal (2%) sinuses. There was much variation in the definition of FESS. In 94% of cases, the LA was accompanied with sedation.

Office-based turbinate surgery had the largest evidence base and the most RCTs, often due to a comparison of different surgical techniques used. Over 10,000 cases were reported with >65% being in the USA and 1.3% in the UK. The majority (87%) of cases were performed under LA alone.

There is no consensus or agreed protocol within the literature on the best combination of topical anaesthetic preparation for the nose and sinuses.

The majority of practitioners at the Bristish Rhinological Society study describes using a 'triple application' regimen including: a topical spray (lidocaine and/or pseudoephedrine hydrochloride) soaked pledgets (cocaine 4-8% and/or adrenaline or pseudoephedrine hydrochloride) infiltration (1-2% lidocaine ± adrenaline)

Utilising triple application of surface anaesthesia is recommended for optimal patient comfort and to achieve a comprehensive surgical outcome Infiltration:

Recommended regions for infiltration with local anaesthetic agents like lignospan include head of middle turbinate, middle turbinate axilla, lateral nasal wall, adjacent septum and some surgeons will also infiltrate along the length of the inferior turbinate (be aware of risk of retinal artery spasm).

This study on a small cohort of patients support the recommendation of British Rhinological society of The use of lignospan as a local anaesthetic agent that helped to control intra -operative bleeding also provide postoperative analgesic control reflected on the low pain score recorded postoperatively.

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