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## Comparison between topical and infiltrative analgesia for post-operative pain in tonsillectomy patients: A double blind randomized controlled experimental study in tertiary care hospital

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**Introduction:** Pain management after tonsillectomy has always been a challenge for the surgeon. Since immediate post-operative pain prohibits the patient from prompt recovery, leads to dissatisfaction of patient and delays in terms of proper diet intake eventually leading to complications such as infection, dehydration and secondary hemorrhage. Pain after tonsillectomy is maximum in first 72 hours and must be adequately controlled. Numerous studies have been done to show the effect of topical and infiltrative analgesia used per or post tonsillectomy but genuine paucity of research to compare both, still exists in literature.

Material & Methods: The study was conducted as an experimental, double blind randomized controlled trial at Jinnah medical and dental college hospital over the period of 3 year (2012-2015). A total of 180 patients with predominant male population with minimum age of 6 years and maximum of 37 years undergoing elective tonsillectomy were included. Two methods of analgesia administrations were used; topical and infiltrative. Topical analgesia was applied via soaked pack of analgesic agent after tonsillectomy in tonsillar fossa while infiltrative analgesia was applied via syringe over tonsillar pillars post tonsillectomy. The patients were randomly divided into six groups; Group 1: Topical 0.5% bupivacaine, Group 2: topical 2% lidocaine, Group 3: topical normal saline (placebo) Group 4: infiltrative 0.5 % bupivacaine Group 5: infiltrative 2 % lidocaine and Group 6: infiltrative normal saline (placebo). The Visual analogue pain scale was used to assess the pain at rest, swallowing and speaking at 4, 8, 12 and 16 hours and

at discharge. Frequency and type of analgesia (primary and additional secondary analgesia) used in ward and at home after discharge were noted along with any complications.

**Results:** Group with infiltration of 0.5% bupivacaine showed the most promising results in terms of decreasing pain in first 24 hours when assessed for speaking, swallowing and at rest. While the use of analgesia was significantly lower in the Infiltration of 0.5% bupivacaine group when compared with other groups. Further this group was the only one which showed no use of analgesia in 3 patients post operatively while use of additional second analgesia was minimal and the use of opioid analgesics was almost nil with this group. Most common complication in our study was secondary hemorrhage. Fewer patients used secondary analgesic at home.

**Conclusion:** Post tonsillectomy pain can be adequately controlled via infiltration with 0.5% bupivacaine and thus reduces pain in swallowing, speaking, and at rest, while the other analgesic agent such as xylocaine 2% proves to be another option if infiltration is used rather than topical pack.

## **Speaker Biography**

Montasir Junaid is an ENT Specialist with special interest in Otology and Head and Neck Surgery. He has worked as Assistant Professor in Pakistan and currently is a visiting faculty in Armed Forces Hospital southern region, Saudi Arabia. He has more than 25 publications and two books published as Author and Co-Author. He is also an Active Member of Pakistan Cochlear Implant Program, where cochlear implants are being done free of charge on financially challenged pediatric patients with complete hearing loss.

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