

Effectiveness of nasal endoscope sterilization using a novel rig-s™ device: A randomized controlled trial

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ABSTRACT

Introduction: The use of nasal endoscopes has allowed the diagnosis of pathologies of the upper aerodigestive tract more precise. However, the nasal endoscope are extremely delicate and must be handled with care. The turnover rate in the clinic may cause damage and breach of the sterilizing process of these endoscopes. Up to date, there is no one single method deemed as the perfect way to sterilize these nasal endoscopes. **Methods:** This randomized clinical trial included 500 endoscopes where 250 nasal endoscopes were sterilized with the conventional autoclave and 250 nasal endoscopes were sterilized with the rig-S™. Post sterilization, the endoscopes undergo swab culture and sensitivity test for bacteria and fungus, and Hepatitis B rapid kit test. **Results:** All 250 nasal endoscopes sterilized with conventional autoclave had no growth toward any bacteria, fungus, or Hepatitis B virus. All 250 nasal endoscopes sterilized with rig-S™ had no growth towards any bacteria, fungus and Hepatitis B virus. **Conclusion:** The rig-S™ device is as effective as conventional autoclave to sterilize nasal endoscope.

A prospective multi-centered randomized controlled trial comparing cold steel dissection and blend mode monopolar tonsillectomy in the pediatric population

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ABSTRACT

Introduction: Tonsillectomy is a common elective procedure performed in otolaryngology practice. This study compares the operative time, intraoperative blood loss and pain scores among pediatric patients undergoing tonsillectomy using either cold-steel dissection (Group A) or blend mode monopolar (Group B). **Methodology:** A prospective single-blinded randomized, controlled trial among patients under 18-year-old who underwent tonsillectomy in three tertiary hospitals between December 2018 to February 2020 (Duration: 18 months). Operative time, blood loss and pain scores at 8-hour, 1 day, 1 week and 2 weeks post-operatively were recorded. Comparisons of continuous variables were performed using Mann-Whitney U test and comparison of categorical variables were performed using Fisher exact test. **Results:** Eighty-five patients were randomized into two groups: Group A (n=39) and Group B (n=44); and 2 patients did not receive treatment allocation. The median age of the study population was 8.0-year-old. No significant difference was observed in distribution of age (p=1.000), sex (p=0.828), dental caries (p=0.558), tonsil grade (p=0.054), infective indication (p=0.480) and surgeon experience (p=0.153) between the two groups. Median tonsillectomy time was 35.00 minutes (IQR=41.2-25.6) in Group B, significantly lower than Group A at 41.14 minutes (IQR=50.6-31.8) (p=0.047). Median intraoperative blood loss was 23.10 mls (IQR=45.9-11.5) in Group B, significantly lower than Group A at 33.80 mls (IQR=79.1-19.6) (p=0.028). A trend towards lower pain score was seen in Group B compared to Group A at all-time points. However, this trend was not significant (p>0.05). **Conclusion:** Blend mode monopolar showed an advantage compared to cold steel dissection tonsillectomy. It resulted in a significantly reduced operative time and blood loss. Results from this RCT appeared promising. However, larger RCTs and meta-analysis will be required to establish the role of BMM in tonsillectomy.