



Wooden Disposable Tongue Depressor: Can Facilitate Appropriate Reinforced Laryngeal Mask Insertion? A Randomized Controlled Trial

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Abstract

Background: The reinforced laryngeal mask airway (RLMA) is difficult to insert due to the flexibility of its inner armored shaft. Many authors agreed that the available techniques have some disadvantages. They use materials that are reusable and require resterilization but may not guarantee infection control particularly during pandemics. The standard method can cause contamination and prone the operator to unanticipated trauma to their finger during placement. So this study aimed to evaluate the usefulness of disposable tongue depressors to aid insertion of the reinforced laryngeal mask airway.

Methods: A randomized controlled trial included one hundred ninety-four adult patients of either gender American Society of Anesthesiologists (ASA) I and II attended for elective day case surgery under general anesthesia. Patients were randomly categorized into two groups; each group consisted of ninety-seven. In the first group, insertion of the reinforced laryngeal mask airway was done using the standard technique of digital manipulation whereas the second one is the study group where disposable wooden tongue depressor guided insertion was used. The data were analyzed using SPSS version 23. Data were presented as frequencies or means and standard deviations. Chi-Square, Fisher Exact, and t-test were used. P value < 0.05 was considered significant.

Results: No significant difference in basic patients' demographic, anthropometric, and clinical characteristics were noticed between the two groups. The insertion time as well as the total time for RLMA placement, was significantly shorter in the new method group. Trauma was significantly less than 2.1% in the new method group compared to the standard group 10.3%, $p=0.003$.

Conclusion: The disposable wood tongue depressor insertion technique helps facilitate the correct placement of the reinforced laryngeal mask airway.

Keywords: Armored, Reinforced Laryngeal Mask Airway, Tongue Depressor, RLMA

Conflicts of Interest: None declared

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Introduction

The reinforced laryngeal mask airway (RLMA) contains an inner armored metallic structure rendering it malleable and non-kinkabl (1). It is considered a good alternative to an endotracheal tube (2). However, its insertion is somewhat difficult because of the flexibility of the long shaft and requires some effort.

Because of the RLMA's broad range of applications (3-6), several approaches and tools have been proposed to enhance its insertion (7). Ninety-degree rotation was used by some authors (8). Video-laryngoscope-guided, stylet introducer, a small tracheal tube combined with a stylet, modified Magill forceps, and a modified tongue depressor was

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↑What is "already known" in this topic:

The standard method for insertion of the reinforced laryngeal mask airway (RLMA) is digital manipulation. However, because of the flexibility of the lengthy shaft, its insertion is relatively difficult.

→What this article adds:

The new technique using a wooden disposable tongue depressor can facilitate correct placement of RLMA with encouraging results rendering its applicable use for easy insertion.