Left Head Rotation As An Alternative To Difficult Tracheal Intubation: A Randomized Open Label Clinical Trial

SECONDARY IDENTIFICATION NUMBER
BGHMC-ERC-2020-27

SCIENTIFIC TITLE
Left Head Rotation As An Alternative To Difficult Tracheal Intubation: A Randomized Open Label Clinical Trial

PROJECT DESCRIPTION

Tracheal intubation is a life-saving intervention not only for physicians but for allied health workers. Optimizing the patient's head and neck position for the best glottic view is a crucial step that accelerates tracheal intubation. Left head rotation maneuver as an innovative approach to tracheal intubation marked a great improvement in glottic visualization and can be an alternative before proceeding to a surgical airway. This study aimed to compare the glottic view as well as intubating conditions in sniffing position versus left head rotation during direct laryngoscopy in a randomized open label clinical trial. Findings in this study can help anesthesiologists manage unexpected difficult airway and can benefit patients by providing quicker airway access during intubations, thereby improving patient safety. There were 52 patients who participated at BGHMC Operating Room from September to December 2020. There was no significant statistical difference between the two groups among age, sex, and BMI. There was no significant difference between the Cormack Lehanne and IDS scores of LeHeR and sniffing position. Greater than one attempt at intubation, use of alternative technique (stylet), and the need for more than 1 operator were commonly used when the patient was in LeHeR position. There was a 100% success rate on intubation with sniffing position while in LeHeR, only 24 out of 26 patients intubated successfully. Among the 2 unsuccessful intubations, both were intubated successfully after shifting to sniffing position. Sniffing position provided a higher intubation success rate since there is better laryngeal exposure and intubation ease compared to left head rotation. Larger trials on different patient populations over an extended period could prove the effectiveness of LeHeR. Since the sniffing position is almost always the default approach, doing simulation training of LeHer among practitioners is recommended to provide greater familiarization. LeHeR can be performed continuously, and challenges can be documented to improve intubation condition.

NUHRA DETAILS

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<th>Regime</th>
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<td>Global competitiveness and innovation in health</td>
<td>Disaster risk reduction and health emergencies</td>
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PROJECT DURATION

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<td>2021-01-23</td>
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PROJECT STATUS
Completed

REASON FOR PROJECT PENDING/SUSPENSION/TERMINATION
Unspecified

IMPLEMENTING AGENCY (PRIMARY SPONSOR)

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<th>Institution</th>
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COOPERATING AGENCY (SECONDARY SPONSOR)

Contact #: (+632) 8377534, (+632) 8377537, (+632) 8372071-80 loc. 2117, 2112
Saliksik Building, DOST Compound, Gen. Santos Ave., Bicutan Taguig City 1631 Philippines
Institution | Classification | Region | LTO #
---|---|---|---
No records Found.

**FUNDING AGENCY (SOURCES OF MONETARY OR MATERIAL SUPPORT)**

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**CONTACT FOR PUBLIC QUERIES**

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<th>Name</th>
<th>E-Mail</th>
<th>Phone Number</th>
<th>Institution and Institution Address</th>
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<tbody>
<tr>
<td>Danya P. Chan, MD</td>
<td><a href="mailto:danyachan@yahoo.com">danyachan@yahoo.com</a></td>
<td>+639958515061</td>
<td>Baguio General Hospital &amp; Medical Center</td>
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**CONTACT FOR SCIENTIFIC QUERIES**

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**IMPLEMENTING AGENCY (PRIMARY SPONSOR)**

<table>
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<tr>
<th>Name</th>
<th>Expertise</th>
<th>Affiliation</th>
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<tr>
<td>Danya P. Chan, MD</td>
<td>Anesthesiology</td>
<td>Baguio General Hospital and Medical Center</td>
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</tbody>
</table>

**RESEARCH CLASSIFICATION**

Clinical Trial

**HEALTH CONDITION(S) OR PROBLEM(S) STUDIED**

Tracheal intubation is an essential life-saving intervention not only for physicians but for allied health workers. In the hospital and prehospital setting, difficult intubation situations may present for both experienced and inexperienced physicians. Poor visualization of the larynx leads to difficult intubation which may result in complications such as aspiration, esophageal intubation as well as prolonged hypoxia. A recent study on the left head rotation maneuver as an innovative approach to tracheal intubation marked a great extent of improvement in Cormack-Lehane grades or glottic visualization among 4 patients. However, limited studies were available to prove that it is effective. Thus, the present study aimed to evaluate the glottic view as well as intubating conditions in sniffing position and left head rotation during direct laryngoscopy in a randomized open label clinical trial.

**PRIMARY OUTCOMES**

This study revealed that the sniffing position provided a higher intubation success rate since there is better laryngeal exposure and intubation ease compared to left head rotation.

**KEY SECONDARY OUTCOMES**

Unspecified

**RECRUITMENT STATUS**

Completed

**COUNTRIES OF RECRUITMENT**

Philippines

**FDA DOCUMENT TRACKING NUMBER**

Contact #: (+632) 8377534, (+632) 8377537, (+632) 8372071-80 loc. 2117, 2112
Saliksik Building, DOST Compound, Gen. Santos Ave., Bicutan Taguig City 1631 Philippines
**FDA APPROVAL DATE**

0000-00-00

**ERC APPROVAL DATE**

2020-09-23

**FIRST ENROLMENT DATE**

0000-00-00

**TARGET SAMPLE SIZE (PHILIPPINES)**

52

**ACTUAL SAMPLE SIZE (PHILIPPINES)**

Unspecified

**REASON FOR THE DIFFERENCE BETWEEN TARGET & ACTUAL SAMPLE SIZES**

Unspecified

**DATE OF FIRST ENROLMENT**

0000-00-00

**KEY INCLUSION AND EXCLUSION CRITERIA (CT)**

**Inclusion Criteria**

- 18-65 years old
- BMI 18.5-35 kg/m²
- ASA Classification I to III
- Mallampati III

**Exclusion Criteria**

- Mallampati IV
- Sternomental distance < 12 cm
- Thyromental distance < 6 cm
- Small mouth opening < 3 fingerbreadths
- Limited head rotation or neck extension
- BMI >35 kg/m²

**STUDY TYPE**

Observational

**INTERVENTION NAME**

Unspecified

**INTERVENTION DESCRIPTION**

Contact #s.: (+632) 8377534, (+632) 8377537, (+632) 8372071-80 loc. 2117, 2112
Saliksik Building, DOST Compound, Gen. Santos Ave., Bicutan Taguig City 1631 Philippines
Unspecified

**AMENDMENT APPROVAL DATE/REASONS**

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<td>Inclusion criteria</td>
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**METHOD OF ALLOCATION**

Randomized

**MASKING / BLINDING**

Open Label

**MASKING DETAILS**

Unspecified

**ASSIGNMENT**

Factorial

**PURPOSE**

This study aimed to assess better visualization of the left head rotation compared to the conventional sniffing position during tracheal intubation. Findings in this study can be used to update current practice to help anesthesiologists manage the unexpected difficult airway and it can also be applied by non-anesthesiologists especially if equipment for surgical airway is not available. The potential outcome of this study can benefit patients by providing quicker airway access during intubations as well as fewer attempts on intubation, thereby improving patient safety.

**PHASE**

Not Applicable

**RESEARCH UTILIZATION**

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