

Clinical Trial Protocol

Iranian Registry of Clinical Trials

31 Jul 2026

Evaluation of palmar pressure test accuracy to confirm proper placement of the endotracheal tube in patients undergoing elective surgery under general anesthesia

Protocol summary

Study aim

Determine the accuracy of the palm pressure test at the correct location of the tracheal tube

Design

This study is a single group clinical trial. The intervention group includes the application of palmar pressure, this test is done by placing on the right side of the patient and applying the pressure on the fifth interdimensional midway of the squamous area of the patient's right chest and confirming the flow of air from the tracheal tube by a plastic gloves attached to the end of the endotracheal tube.

Settings and conduct

This study is done at Imam Khomeini Hospital, Tehran. 70 patients underwent elective surgery with general anesthesia in one group. Intervention was applying palmar pressure in the confirmation of the correct site of the tracheal tube.

Participants/Inclusion and exclusion criteria

Inclusion criteria: ASA Class I and II; Malampati I; Elective patients; Without any anatomical deformity in the chest. Non-inclusion criteria: Pregnancy; emergency surgeries; suspected airway problems; patients with joint pain; osteoarthritis; heavy breast; BMI >30; asthma; a congenital deformity in chest structure; ischemic patients.

Intervention groups

Some compression equal to 3 kg is placed by hand palm in the area below the left nipple in the T5-T6 space, and the pressure importer is simultaneously controlling the air coming out of the tracheal tube with a small balloon that attached to the end of the tracheal tube.

Main outcome variables

The correct location of the tracheal intubation

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20170709034978N2**

Registration date: **2019-04-25, 1398/02/05**

Registration timing: **retrospective**

Last update: **2019-04-25, 1398/02/05**

Update count: **0**

Registration date

2019-04-25, 1398/02/05

Registrant information

Name

Mojgan Rahimi

Name of organization / entity

Tehran University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 84426391

Email address

mrahimi@tums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-02-20, 1396/12/01

Expected recruitment end date

2018-05-22, 1397/03/01

Actual recruitment start date

2018-02-20, 1396/12/01

Actual recruitment end date

2018-05-22, 1397/03/01

Trial completion date

2018-05-22, 1397/03/01

Scientific title

Evaluation of palmar pressure test accuracy to confirm proper placement of the endotracheal tube in patients undergoing elective surgery under general anesthesia

Public title

Palmar pressure test accuracy to confirm proper placement of the endotracheal tube

Purpose

Diagnostic

Inclusion/Exclusion criteria

Inclusion criteria:

ASA Class I and II Malampati I Elective patients NPO for 8 hours or more without any anatomical deformity in the chest

Exclusion criteria:

Pregnancy emergency surgeries suspected airway problems patients with joint pain osteoarthritis heavy breast (in the supine position behind the breast on T5-T6 space) BMI >30 COPD asthma congenital deformity in chest structure ischemic patients

Age

From **18 years** old to **50 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **30**

Actual sample size reached: **70**

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Single

Other design features

The study type is test evaluation

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethical committee of Imam Khomeini hospital(rah)

Street address

Keshavarz blvd

City

Tehran

Province

Tehran

Postal code

1419733141

Approval date

2018-02-20, 1396/12/01

Ethics committee reference number

IR.TUMS.IKHC.REC.1396.4565

Health conditions studied

1

Description of health condition studied

Palmar pressure test accuracy to confirm proper placement of the endotracheal tube

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

determination true or false intubation

Timepoint

Immediately after palm pressure

Method of measurement

Putting the balloon at the end of the tracheal tube and evaluating the air exiting

Secondary outcomes

1

Description

Timepoint

Method of measurement

Intervention groups

1

Description

Intervention group: Applying palm pressure, This test is placed on the right side of the patient and pressure on the interstitial space of the fifth midline of the dialectal right side of the chest of the patient and confirmation of the flow of air from the tracheal tube through the use of a plastic glove attached to the end of the tracheal tube.

Category

Diagnosis

Recruitment centers

1

Recruitment center

Name of recruitment center

Imam Khomeini copmplex hospital

Full name of responsible person

Mojgan Rahimi
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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
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Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Tehran University of Medical Sciences

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

Academic

Person responsible for general inquiries

Contact

Name of organization / entity
Tehran University of Medical Sciences
Full name of responsible person
Mojgan Rahimi
Position
Associate professor
Latest degree
Specialist
Other areas of specialty/work
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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Undecided - It is not yet known if there will be a plan to make this available

Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Not applicable

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Not applicable

Analytic Code

Not applicable

Data Dictionary

Not applicable