

Clinical Trial Protocol

Iranian Registry of Clinical Trials

15 Jun 2026

Compare Diagnostic power of ultrasonography with Capnography to Confirmation correct endotracheal intubation Placement in emergency department of Imam-Khomeini hospital of Sari at 2014

Protocol summary

Summary

This study was an observational study And was conducted a single central. The study included all patients who due to severe trauma, cardiopulmonary arrest or other reasons were severely ill and required intubation. The sample size considering the sensitivity 99%, specificity 94%, the incidence of esophageal intubation 15%, Considering error 05/0 and 95% confidence interval were determined according to the past studies 107 people. The intubating patients was conducted by emergency medicine residents. researchers attempted to determine the location of the ETT with Ultrasonography of the upper airway during intubation. After placement ETT, correct placement was assessed using quantitative waveform capnography. When the exhaled CO₂, breathing more equal five, with characteristic CO₂ waveform is detected, confirmed ETT placement. Ultrasonographic technique was conducted by examining the upper airway in patients. After completion of The intubating, ETT position was immediately determined. If ETT was not observed in the trachea it means it present in esophagus.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016053121480N3**
Registration date: **2016-07-27, 1395/05/06**
Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2016-07-27, 1395/05/06

Registrant information

Name

Fatemeh Jahanian

Name of organization / entity

Mazandaran University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Department of Science and Technology of Mazandaran University of Medical Sciences

Expected recruitment start date

2014-03-21, 1393/01/01

Expected recruitment end date

2016-07-20, 1395/04/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Compare Diagnostic power of ultrasonography with Capnography to Confirmation correct endotracheal intubation Placement in emergency department of Imam-Khomeini hospital of Sari at 2014

Public title

Using ultrasound to confirm the diagnosis right endotracheal intubation

Purpose

Diagnostic

Inclusion/Exclusion criteria

Inclusion criteria: all patients are included due to severe trauma, cardiopulmonary arrest or other reasons is severely ill and require intubation. Exclusion criteria: patients who have anatomical problems of the mouth, larynx, airway and neck area.

Age

From **18 years** old to **100 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **107**

Randomization (investigator's opinion)

N/A

Randomization description**Blinding (investigator's opinion)**

Not blinded

Blinding description**Placebo**

Not used

Assignment

Single

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Research Ethics Committee of Medical Sciences,
Mazandaran University of Medical Sciences

Street address

Mazandaran University of Medical Sciences, Moalem
squer

City

Sari

Postal code**Approval date**

2016-06-05, 1395/03/16

Ethics committee reference number

IR.MAZUMS.REC.95-1508

Health conditions studied**1****Description of health condition studied**

endotracheal intubation

ICD-10 code

T88.4

ICD-10 code description

Failed or difficult intubation

Primary outcomes**1****Description**

Observed endotracheal tube in ultrasound

Timepoint

During intubation the same time

Method of measurement

Probe direction is on cricothyroid membrane upper air all the way up a notch Supra substernal horizontally In Horizontal view and vertical , there are two symmetrical hyperechoic line indicates the presence of ETT in the trachea. Do not see the ETT on the trachea show that it will be in the Esophageal.

Secondary outcomes**1****Description**

Tube existence in the esophagus

Timepoint

During intubation the same time

Method of measurement

Probe direction is on cricothyroid membrane upper air all the way up a notch Supra substernal horizontally In Horizontal view and vertical , there are two symmetrical hyperechoic line indicates the presence of ETT in the trachea. Do not see the ETT on the trachea show that it will be in the Esophageal.

Intervention groups**1****Description**

Ultrasonographic technique runs in the patient with upper airway review. For this purpose, an ultrasound scanners brand of medison build GE Medical Systems Co. Ltd. (Little Chalfont, UK, equipped with a MHz10 linear transducer for ultrasound will use

Category

Diagnosis

Recruitment centers**1****Recruitment center****Name of recruitment center**

Imam Khomeini Hospital

Full name of responsible person**Street address****City**

Sari

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Deputy of Science and Technology of Mazandaran University of Medical Sciences

Full name of responsible person

Ahmad Ali Enayati

Street address

Mazandaran University of Medical Sciences, Moalem squer

City

Sari

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Deputy of Science and Technology of Mazandaran University of Medical Sciences

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

empty

Person responsible for general inquiries

Contact**Name of organization / entity**

emergency department, Mazandaran University of Medical Sciences

Full name of responsible person

fatemeh jahanian

Position

Assistant Professor of Emergency Medicine

Other areas of specialty/work**Street address**

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City

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Web page address

Person responsible for scientific inquiries

Contact**Name of organization / entity**

Student Research Committee, Mazandaran University of Medical Sciences

Full name of responsible person

Banafshe Nouri

Position

Assistant Professor

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Person responsible for updating data

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Position

Medical students

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty