

Clinical Trial Protocol

Iranian Registry of Clinical Trials

01 Jul 2026

Comparing the effect of pressure support ventilation and volume assured pressure support ventilation in weaning of mechanical ventilation in patients after cardiac surgery

Protocol summary

Summary

One of the most common methods of weaning from mechanical ventilation is using pressure support ventilation (PSV). The main features of this method is that it enables the patient to the tail, to determine the volume and respiratory rate. But on the other hand, this method is not able to ensure the delivery of tidal volume assured pressure support ventilation using one of the big obstacles is. In contrast, the volume mode changes like trying stability of the respiratory tidal volume, lung compliance and airway resistance are provided. If the current size of the patient's condition is not reached, the ventilator will automatically close the volume offers. Actually, this method represents a mixture of air pressure and air volume of the merits of the two methods are in a breath. Consequently, a study was conducted to evaluate this method of mechanical ventilation is required. This study aimed to compare the effect of pressure support ventilation (PSV) technique commonly used with pressure support ventilation with the size (VAPS) upon separation from mechanical ventilation in patients after cardiac surgery is performed.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2013040512896N1**
Registration date: **2013-05-24, 1392/03/03**
Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2013-05-24, 1392/03/03

Registrant information

Name

Zohreh Mohamadzadeh Tabrizi

Name of organization / entity

Mashhad University of Medical Sciences

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Mashhad University of Medical Sciences

Expected recruitment start date

2013-05-22, 1392/03/01

Expected recruitment end date

2013-09-21, 1392/06/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparing the effect of pressure support ventilation and volume assured pressure support ventilation in weaning of mechanical ventilation in patients after cardiac surgery

Public title

Comparing the effect of pressure support ventilation and volume assured pressure support ventilation in weaning of mechanical ventilation in patients after cardiac surgery

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria: coronary bypass surgery or heart valve repair or replacement surgery is considered; age over 18 years old; the patient has no history of chronic lung disease; the patient has an EF \geq 30% and duration of mechanical ventilation for more than 8 hours. Exclusion criteria: during the separation process from ventilator patients requiring cardiac resuscitation is pulmonary; drain bleeding area greater than 100 ml / h during 3 hours; the need for further surgery; PEEP > 10 cmH₂O; FiO₂ > 60%; PF ratio < 200; hemodynamic instability (MAP < 65); electrolyte abnormalities affecting weaning of mechanical ventilation (Hypo speech, hypothyroidism, magnesium, hypophosphatemia); dangerous dysrhythmias leading to hemodynamic impairment; inotropes or vasopressor drug dependence and there agitation or severe sedation RASS more than 0 and less than -1

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 35

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Mshhad University of Medical Sciences

Street address

Mashhad- University St - Mshhad University of Medical Sciences

City

Mashhad

Postal code

Approval date

2013-05-04, 1392/02/14

Ethics committee reference number

911157

Health conditions studied

1

Description of health condition studied

Time of weaning from mechanical ventilation in patients after cardiac surgery

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Weaning time

Timepoint

Immediately after intervention

Method of measurement

Clock(timer)

Secondary outcomes

1

Description

Reintubation

Timepoint

After intervention

Method of measurement

Clock(timer)

Intervention groups

1

Description

In the intervention group, patient after cardiac surgery, if within 6 hours do not wean; we use of volume assured pressure supported ventilation (vaps) and register the time.

Category

Treatment - Devices

2

Description

In the control group, patient after cardiac surgery, if within 6 hours do not wean; we use of pressure supported ventilation (psv)(routine method) and register the time.

Category

Treatment - Devices

Recruitment centers

1

Recruitment center

Name of recruitment center

Emam Reza Hospital

Full name of responsible person

Zihreh Mohamadzadeh Tabrizi

Street address

Abdolotaleb blv.

City

Mashhad

Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Mashhad University of Medical Sciences

Full name of responsible person

Ms. Farzaneh Hasanzadeh

Street address

Nursing & Midwifery Faculty

City

Mashhad

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

Yes

Title of funding source

Mashhad 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**

Mashhad University of Medical Sciences

Full name of responsible person

Zohreh Mohamadzadeh Tabrizi

Position

Msc- critical care nursing student

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Mashhad University of Medical Sciences

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Position

Associate professor

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Fax**Email****Web page address****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*