Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparison of Extraplueral Paravertebral Block Versus Thoracic Epidural Block For Post-Thoracotomy Pain

Protocol summary

Study aim

To compare the clinical outcomes and analgesic efficacy in patient's post-thoracotomy treated with extra pleural paravertebral block (PVB) versus thoracic epidural anesthesia (TEA)

Design

A prospective, two-arm, parallel-group, non-randomized clinical trial comparing extra pleural paravertebral block and thoracic epidural block for post-thoracotomy pain. Participants will be allocated to either group without randomization. No blinding will be performed. sample size 140 Participants.

Settings and conduct

This quasi-experimental study was carried out at the Department of Anesthesiology, Combined Military Hospital, Rawalpindi from Jan-Jun 2024.

Participants/Inclusion and exclusion criteria

Inclusion Criteria: ASA-II and III male and female patients between ages 25-65 years presenting in the pre-anesthesia clinic planned for an elective diagnostic and/or therapeutic thoracotomy. Exclusion Criteria: Patients with metastatic disease, major cardiac or respiratory disease, low ejection fraction, post chemotherapy, allergy to lignocaine and/or bupivacaine, unwilling to be included in the study, infection at site of block, coagulation disorders, ineffective regional block, and failure to perform block after three consecutive attempts by a consultant pain specialist

Intervention groups

The patients were divided into Group A (n=70) to receive Paravertebral block (PVB) and Group B (n=70) to receive thoracic epidural anesthesia (TEA)

Main outcome variables

Primary variables studied were median Visual Analogue Scale Score for first 24 hours after 6 hour intervals and mean dose of added rescue analgesia (Intavenous Nalbuphine 0.15 mg/kg) required once pain scores reached above 5 on the Visual Analogue Scal scale for all patients.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20260718070247N1**
Registration date: **2026-08-02, 1405/05/11**
Registration timing: **retrospective**

Last update: **2026-08-02, 1405/05/11**
Update count: **0**

Registration date

2026-08-02, 1405/05/11

Registrant information

Name
Muhammad Tayyab
Name of organization / entity
Combined Military Hospital Rawalpindi
Country
Pakistan
Phone
+92 51 9273426
Email address
capt.tayyab10025@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2024-01-01, 1402/10/11

Expected recruitment end date

2024-06-30, 1403/04/10

Actual recruitment start date

2024-01-01, 1402/10/11

Actual recruitment end date

2024-06-30, 1403/04/10

Trial completion date

empty

Scientific title
Comparison of Extraplueral Paravertebral Block Versus Thoracic Epidural Block For Post-Thoracotomy Pain

Public title
Comparison of Extraplueral Paravertebral Block Versus Thoracic Epidural Block For Post-Thoracotomy Pain

Purpose
Supportive

Inclusion/Exclusion criteria

Inclusion criteria:
ASA-II and III Male and Female Ages 25-65 years Patients presenting in the pre-anesthesia clinic planned for an elective diagnostic and/or therapeutic thoracotomy.

Exclusion criteria:
Metastatic disease, Major cardiac or respiratory disease Post chemotherapy, Allergy to lignocaine and/or bupivacaine Unwilling to be included in the study Infection at site of block Coagulation disorders, Ineffective regional block Failure to perform block after three consecutive attempts by a consultant pain specialist

Age
From **25 years** old to **65 years** old

Gender
Both

Phase
0

Groups that have been masked
No information

Sample size
Target sample size: **140**
More than 1 sample in each individual
Number of samples in each individual: **70**
Actual sample size reached: **140**
More than 1 sample in each individual
Actual sample size in each individual: **70**
The patients were divided into Group A (n=70) to receive Paravertebral block (PVB) and Group B (n=70) to receive thoracic epidural anesthesia (TEA)

Randomization (investigator's opinion)
Not randomized

Randomization description

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Approval date
empty

Ethics committee reference number

2

Ethics committee

Approval date
empty

Ethics committee reference number

3

Ethics committee

Name of ethics committee
Ethical Review Committee/ Institutional Review Board, Combined Military Hospital Rawalpindi

Street address
Combined Military Hospital Rawalpindi (CMH), CMH Rd, Rawalpindi, 46000

City
Rawalpindi

Postal code
46000

Approval date
2025-09-11, 1404/06/20

Ethics committee reference number
719

Health conditions studied

1

Description of health condition studied

ICD-10 code

ICD-10 code description

2

Description of health condition studied
Acute post-thoractomy pain

ICD-10 code
G89.12

ICD-10 code description
Acute post-thoracotomy pain

Primary outcomes

1

Description
Pain

Timepoint
01, 06, 12,18, 24 Hours

Method of measurement
Visual Analouge Scale Score

Secondary outcomes

1

Description
Frequency of Hypotension

Timepoint
In 24 hours.
Method of measurement
Non-invasive blood pressure measurement via sphygmomonometer

2

Description
Frequency of bradycardia
Timepoint
In 24 hours
Method of measurement
Pulse oximeter

3

Description
Frequency of nausea/vomiting
Timepoint
In 24 hours
Method of measurement
Observation

4

Description
Frequency of respiratory depression
Timepoint
In 24 hours
Method of measurement
Respiratory rate

5

Description
Patient satisfaction
Timepoint
After 24 hours
Method of measurement
Likert Scale

Intervention groups

1

Description
Group A (n=70): Patients will receive an extrapleural paravertebral block (EPVB) for postoperative analgesia after thoracotomy according to the institutional protocol.
Category
Other

2

Description
Group B (n=70): Patients will receive thoracic epidural analgesia (TEA) for postoperative analgesia after thoracotomy according to the institutional protocol.
Category
Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Combined Military Hospital Rawalpindi,Pakistan
Full name of responsible person
Muhammad Tayyab
Street address
Combined Military Hospital Rawalpindi (CMH), CMH Rd, Rawalpindi, 46000
City
Rawalpindi
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46000
Phone
+92 51 9273426
Email
rabnawaz.bangash3061@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Combined Military Hospital Rawalpindi
Full name of responsible person
Muhammad Tayyab
Street address
Combined Military Hospital Rawalpindi (CMH), CMH Rd, Rawalpindi, 46000
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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
Combined Military Hospital Rawalpindi
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
Combined Military Hospital Rawalpindi

Full name of responsible person
Muhammad Tayyab

Position
Graded Specialist

Latest degree
Specialist

Other areas of specialty/work
Anesthesiology

Street address
Combined Military Hospital Rawalpindi (CMH), CMH Rd, Rawalpindi, 46000

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Person responsible for scientific inquiries

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

Informed Consent Form
No - There is not a plan to make this available

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

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

Data Dictionary
No - There is not a plan to make this available