

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

COMPARISON OF THE NOVEL PENG (PERICAPSULAR NERVE GROUP) BLOCK VERSUS FASCIA ILIACA BLOCK (FIB) IN PATIENTS UNDERGOING TOTAL HIP ARTHROPLASTY

Protocol summary

Study aim

The objective of this study is to compare the block quality along with sensory and motor characteristics when comparing the pericapsular nerve block (PENG) with the fascia iliaca block in patients undergoing total hip arthroplasty.

Design

Single blind, randomized by non-probability consecutive sampling via lottery method assessing post-operative pains scores after the two techniques in a single center study

Settings and conduct

Will be done according to the inclusion criteria given. Patients undergoing total hip arthroplasty will be undergoing one of the two blocks (PENG or FIB) pre-operatively according to standard methods of NYSORA. Patients will be blinded to the block performed by the consultant anesthetist. Post-operative pain scores and time to patient mobilization will be the primary variables studied.

Participants/Inclusion and exclusion criteria

Inclusion criteria included all ASA-II male and female patients above the age of fifty years requiring total hip arthroplasty (THA) due to advanced osteoarthritis of the hip joint. Exclusion criteria included patients with major cardiac or respiratory debility, metastatic bone disease, allergy to drugs used for the block, bleeding diathesis, coagulation defects, patients with patchy or failed block after administration and patients not willing to be included in the study.

Intervention groups

Group F (receiving fascia iliac block) Group P (receiving PENG block)

Main outcome variables

Mean time for first dose of rescue analgesia, Mean time to patient mobilization

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230809059091N2**

Registration date: **2023-08-16, 1402/05/25**

Registration timing: **registered_while_recruiting**

Last update: **2023-08-16, 1402/05/25**

Update count: **0**

Registration date

2023-08-16, 1402/05/25

Registrant information

Name

Nabeel Butt

Name of organization / entity

Combined Military Hospital Rahim Yar Khan

Country

Pakistan

Phone

+92 313 5969696

Email address

nabeel4allz@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-08-09, 1402/05/18

Expected recruitment end date

2023-11-09, 1402/08/18

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

COMPARISON OF THE NOVEL PENG (PERICAPSULAR NERVE GROUP) BLOCK VERSUS FASCIA ILIACA BLOCK (FIB) IN PATIENTS UNDERGOING TOTAL HIP ARTHROPLASTY

Public title

PENG VERSUS FIB

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Included all ASA-II (American society of Anaesthesiologists) male and female patients above the age of fifty years Requiring total hip arthroplasty (THA) due to advanced osteoarthritis of the hip joint.

Exclusion criteria:

Excluded patients with major cardiac or respiratory debility, metastatic bone disease, allergy to drugs used for the block, bleeding diathesis, coagulation defects, patients with patchy or failed block after administration and patients not willing to be included in the study. Metastatic bone disease Allergy to the drugs used in the block (lignocaine) Bleeding diathesis and coagulation disorders Patients with patchy or failed block after administration Patients not willing to be included in the study

Age

From **50 years** old to **75 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant
- Care provider

Sample size

Target sample size: **150**

Randomization (investigator's opinion)

Randomized

Randomization description

Non-probability consecutive sampling by lottery method into the two interventional groups

Blinding (investigator's opinion)

Single blinded

Blinding description

Single blind with the patient unaware of the block type done

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethical review board Combined Military Hospital
Rahim Yar khan

Street address

Chowk Bahadarpur

City

Rahim Yar Khan

Postal code

64200

Approval date

2023-08-01, 1402/05/10

Ethics committee reference number

00100

Health conditions studied

1

Description of health condition studied

Pain with total hip arthroplasty due to osteoarthritis

ICD-10 code

M16

ICD-10 code description

Osteoarthritis of hip

Primary outcomes

1

Description

Mean time for first dose of rescue analgesia and mean time to patient mobilization

Timepoint

Within 12 hours post-surgery

Method of measurement

Standard Visual Analog scale for pain assessment

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Group F (Fascia iliac block group) will receive the block pre-operatively in the operating room with the patient unaware of the block performed by a consultant anesthetist with at least 5 years of experience under ultrasound guidance administering 20 ml of local anesthetic (2% lignocaine) in the fascia iliac plane. After surgery median pain scores assessment would be done by standard visual analog scale at 3,6,12 and 24 hour duration along with time to patient mobilization

Category

Treatment - Other

2

Description

Intervention group: Group P (pericapsular nerve group block) will receive the block pre-operatively in the operating room with the patient unaware of the block performed by a consultant anesthetist with at least 5 years of experience under ultrasound guidance administering 20 ml of local anesthetic (2% lignocaine) in the pericapsular space and blocking corresponding nerves. After surgery median pain scores assessment would be done by standard visual analog scale at 3,6,12 and 24 hour duration along with time to patient mobilization

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Combined Military Hospital Rahim Yar Khan

Full name of responsible person

Dr. Nabeel Tahir Butt

Street address

Chowk Bahadarpur

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64200

Phone

+92 313 5969696

Email

nabeel4allz@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

CMH Rahim Yar Khan

Full name of responsible person

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Street address

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Grant name

None

Grant code / Reference number

None

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

No

Title of funding source

None

Proportion provided by this source

1

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

Other

Person responsible for general inquiries

Contact

Name of organization / entity

Combined Military Hospital Rahim Yar Khan

Full name of responsible person

Nabeel Butt

Position

Consultant

Latest degree

Specialist

Other areas of specialty/work

Anesthesiology

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Person responsible for scientific inquiries

Contact

Name of organization / entity

Combined Military Hospital Rahim Yar Khan

Full name of responsible person

Dr. Nabeel Tahir Butt

Position

Consultant

Latest degree

Specialist

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Person responsible for updating data

Contact

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Not applicable

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

Output SPSS sheets and all excel data sets

When the data will become available and for how long

After approval of the manuscript by the journal

To whom data/document is available

Everyone open access

Under which criteria data/document could be used

The study data including excel sheets and SPSS output files can be used after permission from the primary author who would receive the application for data use via email

From where data/document is obtainable

The data will be uploaded on the Google drive of the primary author with the email (nabeel4allz@gmail.com) and will be available after a formal email request

What processes are involved for a request to access data/document

A formal email on the address given to the primary author of the article. Any queries asked by the author would be done through email and link to the data from google drive would be sent after author approval (usual time till approval is 7 days)

Comments