Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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% ligonicaine) in the facia 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% ligonicaine) 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

City
Rahim Yar Khan

Postal code
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
Dr. Nabeel Tahir Butt

Street address
Chowk Bahadarpur

City
Rahim Yar Khan

Postal code
64200

Phone
+92 313 5969696

Email
nabeel4allz@gmail.com

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

Street address
Chowk Bahadarpur

City
Rahim Yar Khan

Province
Punjab

Postal code
64200

Phone
+92 313 5969696

Fax

Email
nabeel4allz@gmail.com

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

Other areas of specialty/work
Anesthesiology

Street address
Chowk Bhadarpur

City
Rahim Yar Khan

Province
Punjab

Postal code
64200
Phone
+92 313 5969696
Email
nabeel4allz@gmail.com

Person responsible for updating data

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
Other areas of specialty/work
Anesthesiology
Street address
Chowk Bhadarpur
City
Rahim Yar Khan
Province
Punjab
Postal code
64200
Phone
+92 313 5969696
Email
nabeel4allz@gmail.com

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