

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Comparison of the effect of external oblique plane block and transabdominal plane block in acute postoperative pain of living liver donor

Protocol summary

Study aim

Comparison of the effect of external oblique plane block and transabdominal plane block in acute postoperative pain of living liver donor

Design

The present study is a randomized, double-blind, phase 2-3 clinical trial conducted in a parallel design. A total of 60 patients undergoing liver transplantation will be enrolled in the study. Eligible patients will be randomly assigned to two equal groups, A and B, using a block randomization method.

Settings and conduct

This study will be conducted in the recovery ward. All data will be collected after the surgery is completed by another person who is unaware of the type of intervention.

Participants/Inclusion and exclusion criteria

Inclusion Criteria: All liver donors (aged over 18) who are scheduled to undergo left hepatectomy. Exclusion Criteria: Allergy to the medications used in the study, any contraindications for EOP or TAP blocks, and morbid obesity (body mass index ≥ 40).

Intervention groups

Intervention Group (TAP Group): All patients will receive a standard anesthesia technique for induction. At the end of the surgical procedure, the Transversus Abdominis Plane (TAP) group will receive bilateral TAP blocks under ultrasound guidance, administering 20 milliliters of 0.25% ropivacaine for each block. Control Group (EOP Group): All patients will receive a standard anesthesia technique for induction. At the end of the surgical procedure, the Erector Spinae Block (EOP) group will receive bilateral EOP blocks under ultrasound guidance, administering 20 milliliters of 0.25% ropivacaine for each block.

Main outcome variables

Pain

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20121204011662N17**

Registration date: **2025-03-05, 1403/12/15**

Registration timing: **prospective**

Last update: **2025-03-05, 1403/12/15**

Update count: **0**

Registration date

2025-03-05, 1403/12/15

Registrant information

Name

Mohammad Ali Sahmeddini

Name of organization / entity

Shiraz University Of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 71 1231 8072

Email address

sahmeddini@sums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2025-04-01, 1404/01/12

Expected recruitment end date

2025-12-01, 1404/09/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of the effect of external oblique plane block and transabdominal plane block in acute postoperative pain of living liver donor

Public title

Comparison of the Effects of Two Types of Block on Postoperative Pain in Liver Donors

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

All liver donors (>18 years of age) who will be underwent left hepatectomy

Exclusion criteria:

Allergy to the drugs used in the study any contraindication for EOP or TAP blocks morbid obesity (body mass index ≥ 40)

Age

From **18 years** old

Gender

Both

Phase

2-3

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: **60**

Randomization (investigator's opinion)

Randomized

Randomization description

Patients will be randomly allocated into 2 groups by block randomization. In this technique, a permutation block of size 6 will be made for patients of 2 groups A and B. In each block, equal numbers for 2 groups will be considered in alternative positions. Then 5 blocks of size 6 will be selected randomly and patients will be allocated randomly and equally into 2 groups according to these permutation block. block sequence will be prepare by www.sealedenvelope.com.

Blinding (investigator's opinion)

Single blinded

Blinding description

Informed consent is obtained from the patient prior to surgery. All data is collected after the surgery by a second person who is unaware of the type of intervention.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Shiraz Medical School

Street address

3rd Floor, 3rd buiding of the Shiraz Medical School, Zand Blvd.

City

Shiraz

Province

Fars

Postal code

197871345

Approval date

2024-12-28, 1403/10/08

Ethics committee reference number

IR.SUMS.REC.1403.390

Health conditions studied

1

Description of health condition studied

liver transplantation

ICD-10 code

Y83.0

ICD-10 code description

Surgical operation with transplant of whole organ as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure

Primary outcomes

1

Description

Pain after surgery

Timepoint

At 6, 12, and 24 Hours Post-Operation

Method of measurement

Numerical Rating Scale (NRS)

2

Description

ICU length of stay

Timepoint

After discharge

Method of measurement

Patient history (by day)

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group (TAP group): All patients will receive a standardized anesthetic technique for induction with 100-200 mcg fentanyl, 2-3 mg/kg propofol, and 0.10 mg/kg cis-atracurium and 0.1 mg/kg morphine. At the end of surgery, transversus abdominis plane (TAP) group will be received ultrasound (US)-guided Bilateral TAP blocks using 20-ml volume of ropivacaine 0.20% for each.

Category

Treatment - Other

2

Description

Control group(EOP group): All patients will receive a standardized anesthetic technique for induction with 100-200 mcg fentanyl, 2-3 mg/kg propofol, and 0.10 mg/kg cis-atracurium and 0.1 mg/kg morphine. At the end of surgery, texternal oblique plane (EOP) group will be received ultrasound (US)-guided Bilateral EOP blocks using 20-ml volume of ropivacaine 0.20% for each.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Abu-Alisina hospital

Full name of responsible person

Fatemeh Khalili

Street address

No. 958, Boostan Blvd, Sadra New City.

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Shiraz University of Medical Sciences

Full name of responsible person

Hamid Mohammadi

Street address

7th floor, central building of Shiraz University of Medical Sciences, Vice Chancellor of research, Zand street.

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mohammadi@sums.ac.ir

Grant name

Grant code / Reference number

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

No

Title of funding source

Shiraz University of Medical Sciences

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

Shiraz University of Medical Sciences

Full name of responsible person

Fateme Khalili

Position

Fellowship of Intra-abdominal organ transplantationAnesthesia

Latest degree

Subspecialist

Other areas of specialty/work

Anesthesiology

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Anesthesia Department- Operation Room- Nemazee Hospital- Zande Blvd.

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7193711351

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Person responsible for scientific inquiries

Contact

Name of organization / entity

Shiraz University of Medical Sciences

Full name of responsible person

Mohammad Ali Sahmeddini

Position

Professor of Intra-abdominal Organ Transplantation
Anesthesia

Latest degree

Subspecialist

Other areas of specialty/work

Anesthesiology

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Person responsible for updating data**Contact****Name of organization / entity**

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Full name of responsible person

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Position

Research Assisstant

Latest degree

Bachelor

Other areas of specialty/work

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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

Undecided - It is not yet known if there will be 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

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