

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 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.

City

Shiraz

Province

Fars

Postal code

7199467985

Phone

+98 71 3344 0000

Email

abualisinacharity@gmail.com

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.

City

Shiraz

Province

Fars

Postal code

7134844119

Phone

+98 71 3235 7282

Email

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

Street address

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

City

Shiraz

Province

Fars

Postal code

7193711351

Phone

+98 71 1231 8072

Email

khalili_fa@sums.ac.ir

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

Street address

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

City

Shiraz

Province

Fars

Postal code

7193711351

Phone

+98 71 1231 8072

Fax

+98 71 1212 2430

Email

sahmedini@sums.ac.ir

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

Shiraz University of Medical Sciences

Full name of responsible person

Hamide Saeedizade

Position

Research Assisstant

Latest degree

Bachelor

Other areas of specialty/work

Medical Informatics

Street address

Anesthesiology Department, Faghihi Hospital, Zand
Street.

City

Shiraz

Province

Fars

Postal code

7134844119

Phone

009836281460

Email

saeedi.hamide@gmail.com

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