

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Comparison of the effect of acetazolamide and paracetamol on referred postoperative pain after laparoscopic cholecystectomy

#### Protocol summary

2012-06-25, 1391/04/05

##### Summary

Patients undergoing laparoscopic cholecystectomy experience severe referred pain postoperatively. They usually require more analgesic consumption and long-term hospital stay, which consequently result in higher costs. Thus, this study is aimed to investigate the effect of acetazolamide and paracetamol on referred pain of candidate patients for laparoscopic cholecystectomy, and to find a cost-effective way to reduce pain. In a randomized, controlled, double blinded trial, 114 adult patients with uncomplicated cholelithiasis undergoing laparoscopic cholecystectomy will be evaluated with regard to postoperative referred pain. Patients are randomly assigned to 3 groups to receive 250 mg acetazolamide, 1 gr paracetamol or placebo. In case of any complications, such as ductal damage, bile leakage, biliary ascites or excessive bleeding during surgery, or if the surgeon has to insert a drain at the end of operation, then those patients are excluded from study. The postoperative pain will be assessed according to the location, intensity and type of pain, immediately before and after surgery, after return of consciousness, at the time of stay in post-operative care unit, during 24 hours stay in the ward and at the time of discharge. Also, the patients' demographic data such as age and gender, the dose and kind of analgesic will be documented.

##### Registrant information

###### Name

Arash Peivandi Yazdi

###### Name of organization / entity

Mashhad University of Medical Sciences

###### Country

Iran (Islamic Republic of)

###### Phone

+98 51 1852 5209

###### Email address

peivandia@mums.ac.ir

##### Recruitment status

###### Recruitment complete

##### Funding source

Mashhad University of Medical Sciences

##### Expected recruitment start date

2012-07-22, 1391/05/01

##### Expected recruitment end date

2013-05-21, 1392/02/31

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT201206108384N2**

Registration date: **2012-06-25, 1391/04/05**

Registration timing: **prospective**

Last update:

Update count: **0**

##### Registration date

##### Scientific title

Comparison of the effect of acetazolamide and paracetamol on referred postoperative pain after laparoscopic cholecystectomy

##### Public title

Comparison of the effect of acetazolamide and paracetamol on referred postoperative pain after laparoscopic gallbladder surgery

##### Purpose

Treatment

##### Inclusion/Exclusion criteria

Inclusion Criteria 1- Patients candidates for laparoscopic cholecystectomy  
Excision Criteria 1- Patients with pain disorder  
2- Intraoperative complications such as cystic artery bleeding, leakage of bile into the peritoneal cavity  
3- Postoperative complications such as bile duct injury, bile leakage, or biliary ascites.  
4- Consumption of any narcotics and analgesics within 1 or 2 days before surgery.  
5- Narcotics addicts  
6- Contraindications to acetaminophen and acetazolamide, also lactose and starch (as components of the placebo)  
7- Presence of inflammation, adhesions and excessive dissection which may prolong the operative time for more than 1 hours  
8- The need for drain insertion

#### Age

No age limit

#### Gender

Both

#### Phase

2

#### Groups that have been masked

No information

#### Sample size

Target sample size: **114**

#### Randomization (investigator's opinion)

Randomized

#### Randomization description

#### Blinding (investigator's opinion)

Single blinded

#### Blinding description

#### Placebo

Used

#### Assignment

Parallel

#### Other design features

### Secondary Ids

empty

### Ethics committees

#### 1

##### Ethics committee

###### Name of ethics committee

Mashhad University of Medical Sciences

###### Street address

Ghoreyshi Building, Daneshgah Street

###### City

Mashhad

###### Postal code

##### Approval date

2011-10-15, 1390/07/23

##### Ethics committee reference number

900337

### Health conditions studied

#### 1

##### Description of health condition studied

Cholecystitis

#### ICD-10 code

K81

#### ICD-10 code description

Cholecystitis

### Primary outcomes

#### 1

##### Description

Pain intensity

##### Timepoint

Immediately before and after surgery, after return of consciousness, at the time of stay in post-operative care unit, during 24 hours stay in the ward and at the time of discharge.

##### Method of measurement

Visual Analog Scale (VAS)

#### 2

##### Description

Pain location

##### Timepoint

Immediately before and after surgery, after return of consciousness, at the time of stay in post-operative care unit, during 24 hours stay in the ward and at the time of discharge.

##### Method of measurement

Objectively

### Secondary outcomes

#### 1

##### Description

Analgesic consumption

##### Timepoint

Immediately before and/or after surgery and/or after return of consciousness and/or at the time of stay in post-operative care unit and/or during 24 hours stay in the ward and/or at the time of discharge

##### Method of measurement

mg

### Intervention groups

#### 1

##### Description

Acetazolamide tablet before induction of anesthesia & placebo of paracetamol at the end of surgery

##### Category

Treatment - Drugs

#### 2

##### Description

Placebo tablet of acetazolamide before induction of anesthesia & Placebo Paracetamol at the end of surgery

##### Category

Treatment - Drugs

**3**

### Description

Paracetamol infusion at the end of surgery & placebo tablet of acetazolamide before induction of anesthesia

### Category

Treatment - Drugs

## Recruitment centers

**1**

### Recruitment center

#### Name of recruitment center

Surgical Oncology Research Center

#### Full name of responsible person

Dr. Arash Peivandi Yazdi

#### Street address

Surgical Oncology Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences

#### City

Mashhad

## Sponsors / Funding sources

**1**

### Sponsor

#### Name of organization / entity

Mashhad University of Medical Sciences

#### Full name of responsible person

Dr. Mohsen Tafaghodi

#### Street address

Vice chancellor for Research, Ghoreyshi Building, Daneshgah Street

#### City

Mashhad

#### Grant name

#### Grant code / Reference number

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

Yes

#### Title of funding source

Mashhad University of Medical Sciences

#### Proportion provided by this source

100

#### Public or private sector

*empty*

#### Domestic or foreign origin

*empty*

#### Category of foreign source of funding

*empty*

#### Country of origin

#### Type of organization providing the funding

*empty*

## Person responsible for general inquiries

### Contact

#### Name of organization / entity

Mashhad University of Medical Sciences

#### Full name of responsible person

Dr. Arash Peivandi Yazdi

#### Position

Assistant Professor of Anesthesiology

#### Other areas of specialty/work

#### Street address

Surgical Oncology Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences

#### City

Mashhad

#### Postal code

#### Phone

+98 51 1802 2677

#### Fax

#### Email

surg.rc@mums.ac.ir; peivandia@mums.ac.ir

#### Web page address

<http://www.mums.ac.ir/sorc>

## Person responsible for scientific inquiries

### Contact

#### Name of organization / entity

Mashhad University of Medical Sciences

#### Full name of responsible person

Dr. Arash Peivandi Yazdi

#### Position

Assistant Professor of Anesthesiology

#### Other areas of specialty/work

#### Street address

Surgical Oncology Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences

#### City

Mashhad

#### Postal code

#### Phone

+98 51 1802 2677

#### Fax

#### Email

surg.rc@mums.ac.ir; peivandia@mums.ac.ir

#### Web page address

<http://www.mums.ac.ir/sorc>

## Person responsible for updating data

### Contact

#### Name of organization / entity

Mashhad University of Medical Sciences

#### Full name of responsible person

Dr. Arash Peivandi Yazdi

#### Position

Assistant Professor of Anesthesiology

#### Other areas of specialty/work

#### Street address

Surgical Oncology Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences

**City**

Mashhad

**Postal code****Phone**

+98 51 1802 2677

**Fax****Email**

surg.rc@mums.ac.ir; peivandia@mums.ac.ir

**Web page address**

<http://www.mums.ac.ir/sorc>

**Sharing plan****Deidentified Individual Participant Data Set (IPD)**

*empty*

**Study Protocol**

*empty*

**Statistical Analysis Plan**

*empty*

**Informed Consent Form**

*empty*

**Clinical Study Report**

*empty*

**Analytic Code**

*empty*

**Data Dictionary**

*empty*