

Clinical Trial Protocol

Iranian Registry of Clinical Trials

09 Jun 2026

Investigation of effect of wearing integrated gown and glove and close wearing technique on personnel's gown and glove contamination

Protocol summary

Study aim

Determining and comparing the effect of wearing integrated gown and glove and close wearing technique on the contamination of gown and glove of operating room personnel

Design

The present study is a clinical trial with a control group, with parallel groups, one-way blind. 70 people will be selected with easy randomised access sampling and by removing one of the cards A and B will be divided into two equal groups.

Settings and conduct

The intervention site is the operating room of Al-Zahra and Ayatollah Kashani Hospital in Isfahan. The research is one-way blind and the statistical analyst does not know the study groups.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Scrub staff with at least 6 months of work experience who have associate degree, bachelor's and master's degree in operating room. People are not allergic to fluorescent powder, surgical glove and gown and participate in surgery for at least one hour. Conditions for not entering the study: People are not satisfied to participate in the study.

Intervention groups

After dipping hands in glitterbug powder, personnel Group A are considered as control group and after wearing gown, they will wear their gloves with closed technique and the personnel group B after dipping their hands in powder, put integrated gown and gloves, then a latex glove is also worn on the cotton-polyester glove attached to the gown. Then they are employed as members of the surgical team. One hour after the operation, the gown and gloves are removed, and areas of them soaked in powder are measured by using a UV flashlight.

Main outcome variables

Areas containing glitterbug powder on surgical gown and gloves

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20150715023216N8**

Registration date: **2021-08-10, 1400/05/19**

Registration timing: **registered_while_recruiting**

Last update: **2021-08-10, 1400/05/19**

Update count: **0**

Registration date

2021-08-10, 1400/05/19

Registrant information

Name

Said Amini Rarani

Name of organization / entity

Isfahan University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 31 3522 6158

Email address

ghadami@mui.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-08-06, 1400/05/15

Expected recruitment end date

2021-09-06, 1400/06/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Investigation of effect of wearing integrated gown and glove and close wearing technique on personnel's gown and glove contamination

Public title

Comparison of contamination of two methods of wearing surgical gown and glove

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

Scrub staff with at least 6 months of work experience
Have an associate's, bachelor's and master's degree in operating room
Insensitivity of the sample to fluorescent powder, glove and gown
Participate in surgery for at least one hour

Exclusion criteria:

People are not satisfied to participate in the study.

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

- Data analyser

Sample size

Target sample size: **70**

Randomization (investigator's opinion)

Randomized

Randomization description

First, using the available sampling method, the operating room scrub staff are selected and their inclusion criteria are reviewed. The selection of personnel according to the inclusion criteria and random assignment to each of the two groups by removing one of the letters A and B. Group A wears gowns and glove with close method (control group), group B wears integrated gown and glove. Sampling continues until the required sample number in each group.

Blinding (investigator's opinion)

Single blinded

Blinding description

The statistical analyst does not know what group each sample belongs to.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Esfahan University of Medical Sciences

Street address

Hazar Jarib Street

City

Esfahan

Province

Isfahan

Postal code

۸۱۷۴۶۷۳۴۶۵

Approval date

2021-06-26, 1400/04/05

Ethics committee reference number

IR.MUI.NUREMA.REC.1400.069

Health conditions studied

1

Description of health condition studied

surgical site infection

ICD-10 code

T81.4

ICD-10 code description

Infection following a procedure

Primary outcomes

1

Description

Areas containing glitterbug powder on surgical gown and gloves that indicate contamination will be measured.

Timepoint

before the intervention and one hour after intervention

Method of measurement

by using a standard ruler

Secondary outcomes

empty

Intervention groups

1

Description

Control group: Group A personnel are considered as a control group. After washing the hands in the standard way, the personnel first take 3 grams of fluorescent powder from a third person who also wears sterile gloves and apply it to both hands (palm and back of the hand and between the fingers) from the fingertips to the wrist and then they wear the gown and after wearing the gown, they will wear their gloves with close technique.

Category

Prevention

2

Description

Intervention group: After washing the hands in the standard way, the personnel first take 3 grams of fluorescent powder from a third person who also wears sterile gloves and apply it to both hands (palm and back of the hand and between the fingers) from the fingertips to the wrist and then they wear the integrated gown and glove.

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Al-zahra hospital

Full name of responsible person

Ahmad Ghadami

Street address

Al-zahra hospital, Soffe Boulevard, Isfahan city, Isfahan province, Iran

City

Isfahan

Province

Isfahan

Postal code

8174675731

Phone

+98 31 3620 2020

Fax

+98 31 1668 4510

Email

alzahra@mui.ac.ir

Web page address

<http://alzahra.mui.ac.ir>

2

Recruitment center

Name of recruitment center

Ayatollah Kashani hospital

Full name of responsible person

Ahmad Ghadami

Street address

Ayatollah Kashani hospital, Kashani Street, Isfahan city, Isfahan province, iran

City

Isfahan

Province

Isfahan

Postal code

8183983434

Phone

+98 31 3233 0091

Email

Kashani@mui.ac.ir

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Esfahan University of Medical Sciences

Full name of responsible person

Shaghayegh Haghjoo

Street address

Isfahan university of medical sciences, Hezar Jarib street, Isfahan city, Isfahan province, Iran

City

Isfahan

Province

Isfahan

Postal code

8174673461

Phone

+98 31 3792 3071

Email

research@mui.ac.ir

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Esfahan 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

Esfahan University of Medical Sciences

Full name of responsible person

Ahmad Ghadami

Position

PhD

Latest degree

Ph.D.

Other areas of specialty/work

Nursery

Street address

NO 127, 22 Bahman alley, Raran St, Khorasegan city, Isfahan province, Iran

City

Isfahan

Province

Isfahan

Postal code

8174673461

Phone

+98 31 5226 1158

Email

ghadami@mui.ac.ir

Person responsible for scientific inquiries**Contact****Name of organization / entity**

Esfahan University of Medical Sciences

Full name of responsible person

Ahmad Gadami

Position

PhD

Latest degree

Ph.D.

Other areas of specialty/work

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

Esfahan University of Medical Sciences

Full name of responsible person

Ahmad Ghadami

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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

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

Title and more details about the data/document

Individual participant data collected for the primary outcome measures

When the data will become available and for how long

After publication for one year

To whom data/document is available

For all people who request for data

Under which criteria data/document could be used

It is allowed to perform any analysis on the data, but use of data for publication is not allowed.

From where data/document is obtainable

Corresponding author of article

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

After requesting the data by email to corresponding author, the data will be sent after a maximum period of one week

Comments