Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparison of the effectiveness of vitamin c supplementation on procalcitonin biomarker in community acquired pneumonia

Protocol summary

Study aim
The effect of vitamin c supplementation on procalcitonin biomarker in community acquired pneumonia

Design
Parallel, placebo, double blind, randomized clinical trial

Settings and conduct
The statistical population included patients referred to infectious unit of shahid beheshti hospital in Kashan. Patients, researcher and doctors were unware of the medications or placebo interventions. Patients and medications were coded by someone who did not intervene in the study. Intervention group: This group received one vitamin C 1000 mg EFF tab daily and other medications for treating pneumonia for 10 days. Control group: This group received one vitamin C placebo 1000 mg EFF tab daily and other medications for treating pneumonia for 10 days. serum procalcitonin was measured at the beginning of patient's entrance and at the end of the study(after 10 days) .

Participants/Inclusion and exclusion criteria
Inclusion criteria: Diagnosis of community acquired pneumonia by physician based on clinical symptoms, chest x-rey.patients's, history and lab test results. Obtaining informed consent from the patients. Patients older than 18 years old in both gender Exclusion criteria: Pregnancy or lactation .Any hepatic or kidney failure. Taking any chemothrapy medications and NSAIDs. Taking antibiotics for other infectious disease at the same time

Intervention groups
Intervention group: This group received one vitamin C 1000 mg EFF tab daily and other medications for treating pneumonia for 10 days. Control group: This group received one vitamin c placebo 1000 mg EFF tab daily and other medications for treating pneumonia for 10 days. Serum procalcitonin was measured and checked at the beginning of patient's entrance and at the end of the study(after 10 days) .

Main outcome variables
Serum level of procalcitonin in day 1 and 10 did not show any significant difference between drug and placebo groups.

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20150706023084N3**
Registration date: **2019-10-11, 1398/07/19**
Registration timing: **retrospective**

Last update: **2019-10-11, 1398/07/19**
Update count: **0**

Registration date
2019-10-11, 1398/07/19

Registrant information

Name
MARYAM SHIEHMORTEZA

Name of organization / entity
AZAD UNIVERSITY PHARMACEUTICAL SCIENCES

Country
Iran (Islamic Republic of)

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2018-03-06, 1396/12/15

Expected recruitment end date
2019-01-21, 1397/11/01

Actual recruitment start date
2018-03-16, 1396/12/25

Actual recruitment end date
2019-04-15, 1398/01/26
Trial completion date
2019-04-24, 1398/02/04

Scientific title
Comparison of the effectiveness of vitamin c supplementation on procalcitonin biomarker in community acquired pneumonia

Public title
Effect of vitamin c supplementation on procalcitonin biomarker in community acquired pneumonia
Purpose
Supportive
Inclusion/Exclusion criteria
Inclusion criteria:
Diagnosis of community acquired pneumonia by physician based on clinical symptoms, chest x-rey, patients's.history and lab test results Obtaining informed consent from the patients Patients older than 18 years old in both gender.
Exclusion criteria:
Pregnancy or lactation Any hepatic or kidney failure Taking any chemothrapy medications and NSAIDs Taking antibiotics for other infectious disease at the same time
Age
From **18 years** old to **80 years** old
Gender
Both

Phase
3
Groups that have been masked

- Participant
- Care provider
- Investigator

Sample size
Target sample size: **40**
More than 1 sample in each individual
Number of samples in each individual: **2**
Serum of procalcitonin
Actual sample size reached: **35**
More than 1 sample in each individual
Actual sample size in each individual: **2**
Serum of procalcitonin
Randomization (investigator's opinion)
Randomized
Randomization description
Simple randomization Random-number table
Blinding (investigator's opinion)
Double blinded
Blinding description
All patients who had the necessary conditions to enter the study were assigned randomly into two groups of drugs and placebo. Patients, researcher and doctors were unware of the medications or placebo interventions. Patients and medications were coded by someone who did not intervene in the study.
Placebo
Used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics committee of department of pharmaceutical tehran islamic azad university of medical science.
Street address
Dr shariati street, Khaghani street, Tehran islamic azad university of medical science
City
Tehran
Province
Tehran
Postal code
1916893813
Approval date
2018-03-03, 1396/12/12
Ethics committee reference number
IR.IAU.PS.REC.1396.220

Health conditions studied

1

Description of health condition studied
Community acquired pneumonia
ICD-10 code
ICD-10 code description

Primary outcomes

1

Description
Procalcitonin(PCT) is produced in c-cells of thyroid gland as a prohormone of calcitonin. PCT has emerged as promising marker for the diagnosis of infections, because higher level of pct is found in bacterial infections than in viral infections and non specific inflammatory disease. Serum is used for measure of level of procalcitonin.
Timepoint
Serum level of procalcitonin was measured at the beginning and at the end of the study(after 10 days).
Method of measurement
The serum pct level was measured by VIDAS Biomerieux and pct kit, prepared by ELFA.

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: This group received one vitamin C 1000 mg EFF tab daily and other medications for treating pneumonia for 10 days. Serum procalcitonin was measured and checked at the beginning of patient's entrance and at the end of the study(after 10 days).
Category
Treatment - Drugs

2

Description
Control group: This group received one vitamin C placebo 1000 mg EFF tab daily and other medications for treating pneumonia for 10 days. Serum procalcitonin was measured and checked at the beginning of patient's entrance and at the end of the study(after 10 days).
Category
Placebo

Recruitment centers

1

Recruitment center
Name of recruitment center
Shahid beheshti hospital in kashan
Full name of responsible person
Dr.Mansoreh Momen Heravi
Street address
Ghotb ravandi street, Shahid beheshti hospital
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Kashan
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Isfehan
Postal code
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Phone
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Email
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Web page address
http://beheshti.kaums.ac.ir/

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Islamic Azad University
Full name of responsible person
Dr Farshad Hashemian
Street address
Dr shariati street, Khaghani street, Tehran islamic azad university of medical science
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http://iaups.iautmu.ac.ir/fa
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
Student
Proportion provided by this source
100
Public or private sector
Private
Domestic or foreign origin
Domestic
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
Persons

Person responsible for general inquiries

Contact
Name of organization / entity
Islamic Azad University
Full name of responsible person
Mahsa Nikzad
Position
Student
Latest degree
Medical doctor
Other areas of specialty/work
Medical Pharmacy
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Person responsible for updating data

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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