Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

Protective and mitigatory effect of oral vitamin C against radiation-induced serum stress oxidative in thyroid cancer patients ablated with high dose of radioiodine

Protocol summary

Summary

This project will attempt to reduce unwanted radiation injuries in thyroid cancer patients ablated by radioiodine with evaluation of stress oxidative of serum in the presence of vitamin C. This study will be double-blind with placebo control. The study population will be patients of radioiodine therapy center of Namazi Hospital, Shiraz, Iran. Main inclusion criteria include: patients received more than 150 millicuries radioiodine; consent of the patient and exclusion criteria are the lack of patient consent. Prescription of vitamin C from 2 days before to 2 days after radioiodine therapy will be the intervention of this study. For evaluation of stress oxidative, the amount of catalase, superoxide dismutase, glutathione and malondialdehyde in serum will be measured.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017041833505N1**
Registration date: **2017-05-26, 1396/03/05**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2017-05-26, 1396/03/05

Registrant information

Name

Esmaeil Jafari

Name of organization / entity

Shiraz University of Medical Sciences

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Funding approved in Vice chancellor for research, Shiraz University of Medical Sciences

Expected recruitment start date

2017-05-10, 1396/02/20

Expected recruitment end date

2017-06-22, 1396/04/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Protective and mitigatory effect of oral vitamin C against radiation-induced serum stress oxidative in thyroid cancer patients ablated with high dose of radioiodine

Public title

Evaluating effect of vitamin C on reducing harmful effect of radioiodine

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria: The patient has a suitable general condition; no kidney disease; radioiodine dose more than 150 millicuries; signing informed consent. Exclusion criteria: The patient doesn't cooperate during intervention for taking the vitamin.

Age

No age limit

Gender
Both

Phase
4
Groups that have been masked
No information
Sample size
Target sample size: **60**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Double blinded
Blinding description
Placebo
Used
Assignment
Parallel
Other design features
Block randomization

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics Committee of Shiraz University of Medical Sciences
Street address
Shiraz University of Medical Sciences, Zand Avenue
City
Shiraz
Postal code
Approval date
2017-01-22, 1395/11/03
Ethics committee reference number
IR.SUMS.REC.1395.169

Health conditions studied

1

Description of health condition studied
thyroid cancer
ICD-10 code
C73
ICD-10 code description
Malignant neoplasm of thyroid gland

Primary outcomes

1

Description
Catalase
Timepoint
Before and after intervention
Method of measurement
Reduce of absorption of H2O2 at 240nm by Spectrophotometric method

2

Description
Superoxide Dismutase
Timepoint
Before and after intervention
Method of measurement
Using Misra and Fridovich method based on the inhibition of spontaneous oxidation of adrenaline to adrenochrome by SOD in 10.2pH. Maximum light absorption of adrenochrome is at wavelength of 480nm.

3

Description
Glutathione
Timepoint
Before and after intervention
Method of measurement
Using Elman method which DTNB is added to all of Super Natants and after that absorption in 412 nm is read.

4

Description
Malondialdehyde
Timepoint
Before and after intervention
Method of measurement
Colorimetric method with a spectrophotometer at a wavelength of 532 nm and in nano gram per ml.

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: Used drug will be effervescent tablets of vitamin C. Intervention group will have three sub-groups. 1- A sub-group which 2 days before radioiodine therapy will start taking 3 tablets of 500 mg vitamin per day. 2- A sub-group which will start taking 3 tablets of vitamin per day after radioiodine therapy for 2 days after that. 3- A sub-groups which will start taking 3 tablets of vitamin per day from 2 days before radioiodine therapy to 2 days after that.
Category
Treatment - Drugs

2

Description
Placebo group: A groups will be performed routine treatment. Just for placebo, water and some juice will be

used.

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Namazi Hospital, Shiraz

Full name of responsible person

Mehrossadat Alavi

Street address

Nuclear Medicine Department, Namazee Hospital, Zand Ave.

City

Shiraz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for research, Shiraz University of Medical Sciences

Full name of responsible person

Seyyed Basir Hashemi

Street address

Shiraz University of Medical Sciences, Zand Avenue

City

Shiraz

Grant name

-

Grant code / Reference number

-

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

Yes

Title of funding source

Vice Chancellor for research, Shiraz 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

Shiraz University of Medical Sciences

Full name of responsible person

Esmaeil Jafari

Position

Student/Masters student

Other areas of specialty/work

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Person responsible for scientific inquiries

Contact

Name of organization / entity

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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