Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

Comparison the effect of CO2 laser therapy with respect to topical corticosteroid for treatment of oral lichen planus

Protocol summary

Summary

The aim of our study was to assay and compare the effect of CO2 laser ablation therapy with respect to topical corticosteroids in the treatment of symptomatic oral lichen planus. In this interventional clinical trial study, patients with symptomatic oral lichen planus(OLP) that refer to Oral Medicine Department of Faculty of Dentistry of Shiraz Medical Sciences evaluated accurately. patients with positive clinical and histopathological verification enter to study .Those who were pregnant or who had a history of systemic disease were excluded. Finally, thirty six patients were randomly allocated into two groups. 18 patients allocate in interventional group(laser group) and 18 patients allocate in control group(corticosteroid group) . The interventional group treated by CO2 laser and the control group used Dexamethasone mouthwash 0.1% as topical steroid. For laser group used CO2 laser ablation therapy at 4 consecutive section during 2weeks and each lesion with at least 2-3mm of normal borders abladed. Control group used 3 times daily topical steroid in affected sites for 4 weeks. Each patient of both groups followed 2months after last treatment. Visual Analogue Scale (VAS) for pain and burning sensation and Thongprasom criteria(for size and type change) used for treatment evaluation.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201104286322N1**
Registration date: **2013-07-06, 1392/04/15**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2013-07-06, 1392/04/15

Registrant information

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Recruitment status

Recruitment complete

Funding source
Shiraz University of Medical Sciences

Expected recruitment start date

2011-01-01, 1389/10/11

Expected recruitment end date

2011-06-14, 1390/03/24

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison the effect of CO2 laser therapy with respect to topical corticosteroid for treatment of oral lichen planus

Public title

Comparison the effect of CO2 laser therapy with respect to topical corticosteroid for treatment of oral lichen planus

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: patient with symptomatic oral lichen planus that refer to oral medicine department of faculty of dentistry of Shiraz Medical Sciences that clinical and histopathological data confirm this diagnosis Exclusion criteria : pregnancy; systemic disease;oral lesion close to amalgam filling ; lesions that is treat by other treatments

Age

From **20 years** old to **80 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **36**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Shiraz Medical Ethics Committee

Street address

Central Building of Shiraz University of Medical Sciences, Zand Street. Shiraz, Fras , Iran

City

Shiraz

Postal code

Approval date

2010-08-20, 1389/05/29

Ethics committee reference number

CT-89-5476

Health conditions studied

1

Description of health condition studied

oral lichen planus

ICD-10 code

L43

ICD-10 code description

Lichen planus

Primary outcomes

1

Description

pain and burning sensation score

Timepoint

4 section during 2 week

Method of measurement

VAS criteria

2

Description

size and type of lesion

Timepoint

4 section during 2weeks

Method of measurement

ruler measurement and Thongprasom criteria

Secondary outcomes

empty

Intervention groups

1

Description

interventional group: CO2 laser ablation therapy on standard protocol (power 4w,2 J/Cm2 ,frequency 80Hz,Pulse Mode, straight Tip, defocused mode and non-contact) at 4 section during 2 week and at least 2-3mm of normal borders abladed

Category

Treatment - Other

2

Description

control group : used dexamethasone mouthwash 0.1% as topical steroid 3 times daily in affected sites for 4 weeks

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Faculty of Dentistry of Shiraz University of Medical Sciences

Full name of responsible person

Dr. Mostafa Rezaee

Street address

Oral medcine department, Faculty of Dentistry of Shiraz University of Medical Sciences, Ghasr o dasht street , Shiraz , Fars, Iran

City

Shiraz

Sponsors / Funding sources

1

Sponsor
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Shiraz
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Shiraz University of Medical Scinces
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
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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