

Clinical Trial Protocol

Iranian Registry of Clinical Trials

07 Jul 2026

Clinical success of maxillary incisors intrusion by using mini screw

Protocol summary

Study aim

Clinical success of maxillary incisors intrusion by using mini screw

Design

30 patients with at least 4mm deep bite and gummy smile from patients referring to orthodontics department of Mashhad Dental School. We divide these patients into two randomly selected blocks after initial leveling and alignment.

Settings and conduct

In a group, using 2 mini screws and in another group, using the usual Burston, segmented arch, for maxillary incisors intrusion. After 6 months, or after intrusion has been completed, we rate the intrusion and root resorption and gingival display and incisors protrusion and periodontal index measures. There is no possibility of blinding in the study. People are selected and treated at Mashhad Dental School.

Participants/Inclusion and exclusion criteria

People entering the study: Post pubertal patients who have gummy smile and are suitable for the true intrusion of the anterior maxillary teeth. Failure to enter the study: occurrence of specific medical conditions, trauma, root resorption before orthodontic therapy, previous orthodontic treatment

Intervention groups

In the intervention group, we use two mini scropers between the lateral and canine maxilla in the mucogingival line. In the control group, the usual method of intrusion is through the Burston, segmented arch.

Main outcome variables

Intrusion Rate Over 6 Months; Reduced Overbite; Reduced Gingival Display In Voluntary Smile; Root resorption; Maxillary Incisor Tipping; Sulcus Depth Changes; Keratinized Gingiva and Sticky Gums; Bleeding on Probing; crestal resorption

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20180929041176N1**

Registration date: **2019-02-24, 1397/12/05**

Registration timing: **registered_while_recruiting**

Last update: **2019-02-24, 1397/12/05**

Update count: **0**

Registration date

2019-02-24, 1397/12/05

Registrant information

Name

Alireza Chamani

Name of organization / entity

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-01-10, 1397/10/20

Expected recruitment end date

2019-03-11, 1397/12/20

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Clinical success of maxillary incisors intrusion by using mini screw

Public title

Clinical success of maxillary incisors intrusion by using

mini screw

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

post pubertal patient gummy smile (high gingival display at social smile) good for maxillary incisors intrusion

Exclusion criteria:

Occurrence of special medical conditions trauma root resorption before orthodontic therapy Previous orthodontic or orthopedic treatment

AgeFrom **14 years** old**Gender**

Both

Phase

N/A

Groups that have been masked*No information***Sample size**Target sample size: **30****Randomization (investigator's opinion)**

Randomized

Randomization description

Block method Considering that 30 patients should be placed in two groups, the blocks of 6 are AAABBB, AABABB, ABBAAB, BBBAAA, BBABAA, BAABBA, so that the number of samples in each group is identical. Then select random numbers between one to six (for example, 1 4 5 and ...)

Blinding (investigator's opinion)

Not blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics committee of Mashhad university of medical sciences

Street address

Faculty of Dentistry, Vakil Abad Blvd

City

Mashhad

Province

Razavi Khorasan

Postal code

9177948959

Approval date

2018-11-26, 1397/09/05

Ethics committee reference number**Health conditions studied****1****Description of health condition studied**

Gummy Smile

ICD-10 code**ICD-10 code description****Primary outcomes****1****Description**

Amount of decrease gingival display after intrusion

Timepoint

Before intrusion and after 6 month

Method of measurement

Smile analyzer software

Secondary outcomes**1****Description**

Amount of root resorption after intrusion

Timepoint

Before and 6 month after intrusion

Method of measurement

Periapical Radiography

Intervention groups**1****Description**

Intervention group: We will insert 2 mini screw between the lateral and canine of maxilla and intrude the anterior segments.

Category

Treatment - Other

2**Description**

Control group: Anterior segmentation intrusion is performed with the Burston segmented arch .

Category

Treatment - Other

Recruitment centers**1****Recruitment center****Name of recruitment center**

Faculty of dentistry of Mashhad

Full name of responsible person

Farzin Heravi

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Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

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Full name of responsible person

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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

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**

Mashhad University of Medical Sciences

Full name of responsible person

Farzin Heravi

Position

Professor

Latest degree

Specialist

Other areas of specialty/work

Dentistry

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

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Full name of responsible person

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Latest degree

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Other areas of specialty/work

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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