Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

Evaluation of clinical success, root resorption and periodontal changes in molars after intrusion using miniscrew.

Protocol summary

Summary

The goal of this study was to evaluate the possibility and effectiveness of a new technique for posterior tooth intrusion with mini screws. In this study 10 women with overextruded molar teeth were selected. Exclusion criteria included active periodontal diseases, previous orthodontic treatment and previous root resorption. For each tooth intrusion, two bracket type mini screws -one in mesiobuccal and another in mesiolingual of the aimed tooth were used and totally 100 gr force (50 gram each side) acted on tooth till clinically acceptable intrusion was achieved. After completing treatment intrusion amount, root resorption was evaluated for each tooth by millimeter scale. Evaluation technique was based on comparing periapical radiographs before and after treatment and 6 months after retention. Periodontal status of selected teeth before and after treatment and 6 months after retention was evaluated and compared.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT138711061585N1**
Registration date: **2009-02-15, 1387/11/27**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2009-02-15, 1387/11/27

Registrant information

Name

Shahin Bayani

Name of organization / entity

Mashhad Dental Univercity

Country

Iran (Islamic Republic of)

Phone

+98 51 1501 2281

Email address

bayanish841@mums.ac.ir

Recruitment status

Recruitment complete

Funding source

Pro-Vice-chancellor for research, Mashhad University of Medical Sciences and Health Services

Expected recruitment start date

2007-01-01, 1385/10/11

Expected recruitment end date

2008-01-01, 1386/10/11

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation of clinical success, root resorption and periodontal changes in molars after intrusion using miniscrew.

Public title

Evaluation of clinical success, root resorption and periodontal changes in molars after intrusion using miniscrew.

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Presence of overextruded upper first molars that come into the edontolous space of opposite arch. Exclusion criteria: active periodontal disease, previous orthodontic treatment, previous root resorption.

Age

From **25 years** old to **57 years** old

Gender

Female

Phase
3
Groups that have been masked
No information
Sample size
Target sample size: **10**
Randomization (investigator's opinion)
N/A
Randomization description
Blinding (investigator's opinion)
Not blinded
Blinding description
Placebo
Not used
Assignment
Single
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics committee of Mashad University of Medical Science
Street address
Ghoreishi building, Daneshgah street,
City
Mashhad
Postal code
Approval date
2006-07-01, 1385/04/10
Ethics committee reference number
79

Health conditions studied

1

Description of health condition studied
Overerupted maxillary first molar
ICD-10 code
k00.6
ICD-10 code description
Disturbances in tooth eruption

Primary outcomes

1

Description
Upper molar intrusion
Timepoint
Before, after treatment and 6 months after retention
Method of measurement
Radiographic assesment

Secondary outcomes

1

Description
Changes in periodontal status
Timepoint
t0(begining of the treatment), t1(end of active treatment), t2(6 months after retention)
Method of measurement
Radiographic measurement, clinical observation

2

Description
Root resorption
Timepoint
t0(begining of the treatment), t1(end of active treatment), t2(6 months after retention)
Method of measurement
Radiographic measurement

Intervention groups

1

Description
For each tooth intrusion, two bracket type mini screws - one in mesiobuccaland another in mesiolingual of the aimed tooth were used and totally 100 gr force (50 gr each side) acted on tooth till clinically acceptable intrusion was achieved.
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Mashhad Dental School, Dental Research Center
Full name of responsible person
Shahin Bayani
Street address
Park square,Opposite Mellat Park,Mashhad
City
Mashhad

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Vice Chancellor for research- Mashhad University of Medical Sciences
Full name of responsible person
Research Management Department

Street address
Ghoreishi Building, Daneshgah Street
City
Mashhad
Grant name
گرنت اساتید
Grant code / Reference number
86100
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Vice Chancellor for research- Mashhad 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
Mashhad Dental School
Full name of responsible person
Shahin Bayani
Position
Orthodontic resident
Other areas of specialty/work
Street address
No26, Fareghotahsilan 1 street , Vakil abad Avenue
City
Mashhad
Postal code
91898-45971
Phone
+98 51 1501 2281
Fax
Email
bayanish841@mums.ac.ir
Web page address

Person responsible for scientific inquiries

Contact
Name of organization / entity
Mashhad Dental School
Full name of responsible person
Farzin Heravi
Position
Orthodontic Specialist
Other areas of specialty/work
Street address
No13, Bozorgmehr 16 street
City
Mashhad
Postal code
Phone
+98 51 1882 9501
Fax
Email
dr_heravi@yahoo.com
Web page address

Person responsible for updating data

Contact
Name of organization / entity
Mashhad Dental School
Full name of responsible person
Shahin Bayani
Position
Orthodontic resident
Other areas of specialty/work
Street address
No26, Fareghotahsilan 1 street, Vakilabad Avenue
City
Mashhad
Postal code
91898-45971
Phone
+98 51 1501 2281
Fax
Email
bayani_shahin@yahoo.comذشغشدهسا841@ئعئس.شز.هق
Web page address

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