

How ear symptoms affect recovery from jaw disorders using non-drug non-surgical treatment

Submission date 21/09/2024	Recruitment status No longer recruiting	☒ Prospectively registered ☐ Protocol
Registration date 24/09/2024	Overall study status Completed	☐ Statistical analysis plan ☒ Results
Last Edited 28/05/2026	Condition category Digestive System	☐ Individual participant data

Plain English summary of protocol

Background and study aims

Temporomandibular disorder (TMD) affects the jaw joint and can cause a variety of symptoms, including jaw pain, difficulty chewing, and limited movement of the jaw. Sometimes, TMD also causes ear-related symptoms like ear pain and ringing in the ears (tinnitus). This study aims to evaluate how ear symptoms can affect recovery from TMD when treated with physiotherapy and occlusal splints.

Who can participate?

Males and females of any age can participate if they have a temporomandibular disorder (TMD). In case of ear-related symptoms, a medical report will be needed from an ENT specialist to exclude that the ear is the origin of the symptoms.

What does the study involve?

After diagnosis, a treatment plan will be established which will include physiotherapy and an occlusal splint.

All participants receive the same type of treatment. The treatment will be individual according to the needs listed in the treatment plan.

The doctor will measure the pain and other symptoms before and after 3 months of the beginning of the treatment.

What are the possible benefits and risks of participating?

The benefits are the partial/complete healing of the symptoms. The treatment is very safe. Some people may experience mild discomfort or pain when starting physiotherapy exercises or wearing an occlusal splint. Also, the jaw muscles may feel sore as they adjust to new movements or the use of a splint. Finally, wearing a splint can sometimes cause a temporary change in how teeth fit together when biting.

Where is the study run from?

Al-Sham private university ASPU, faculty of Dentistry (Syria)

When is the study starting and how long is it expected to run for?

September 2024 to February 2025

Who is funding the study?

This study publication is financially supported by the doctor leading it. The patient will pay for the treatment.

Who is the main contact?

Dr. Samer Al Akkad, DDS, MSc, Ph.D.

Dr.samerakkad@gmail.com

Contact information

Type(s)

Public, Principal investigator

Contact name

Dr Samer Al Akkad

ORCID ID

<https://orcid.org/0009-0009-3578-9770>

Contact details

Al-Sham private university ASPU, Faculty of Dentistry

Damascus

Syria

0100

+963 11 215 3360

Dr.samerakkad@gmail.com

Type(s)

Scientific

Contact name

Dr Marwan AL AKKAD

ORCID ID

<https://orcid.org/0000-0001-8164-5940>

Contact details

Faculty of Medicine and Dentistry, Palacký University Olomouc

Hněvotínská 3

Olomouc

Czech Republic

775 15

+420 720358653

Akkadian@web.de

Additional identifiers

Protocol serial number

REC002

Study information

Scientific Title

Comparison between the prognosis of TMD with and without accompanying otologic symptoms after non-invasive non-pharmacological treatment

Acronym

TMD-POS

Study objectives

Null hypothesis: there is no significant relation between the prognosis of TMD and the accompanying otologic symptoms.

Ethics approval required

Ethics approval required

Ethics approval(s)

Approved 09/09/2024, The Research Ethics Committee (RLC) at Al-Sham private university (Al-Baramkeh, Musab Bin Omair Street - next to Tishreen Stadium, Damascus, 0100, Syria; +963 11 215 3360; info@aspu.edu.sy), ref: REC002

Primary study design

Interventional

Study design

Single-center interventional non-randomized clinical trial

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Temporomandibular disorder (TMD)

Interventions

Both groups of patients will get the same type of intervention. Patients having TMD with accompanying otologic symptoms are allocated to one group, while patients having TMD without accompanying otologic symptoms are allocated to another group.

The intervention is non-invasive in the form of physiotherapy and occlusal splints.

1- Physiotherapy includes:

a- massage

b- hot compress

d- infrared radiation

c- stretching exercises for the joint capsule and ligament in cases of joint compression.

2-Occlusal splints:

They will be fabricated using a conventional technique based on initial diagnostic impressions of the maxillary and mandibular arches with alginate material and on a wax bite to record the desired jaw position for the splint.

The study itself will finish after 3 months but the intervention will last up to 6 months, depending on the improvement in the condition of the TMD of each patient individually. This means that some patients might finish earlier.

Intervention Type

Mixed

Primary outcome(s)

1. The initial symptoms of a TMD and the accompanying otologic symptoms (if present) are recorded during the diagnosis
2. Improvement in symptoms of a TMD and in symptoms of the accompanying otologic symptoms are then recorded after a 3-month follow-up
3. In case one of the symptoms is pain, the Visual Analogue Scale (VAS) will be used to determine the amount of pain that a patient feels
4. The diagnosis, treatment, and follow-up phases will be done by the same experienced TMJ specialist Dr. Samer Al Akkad

Key secondary outcome(s)

There are no secondary outcome measures

Completion date

01/02/2025

Eligibility

Key inclusion criteria

1. Having TMD only or having TMD with accompanying otologic symptoms.
2. If otologic symptoms are present, the patient should be referred by an ENT specialist who confirms a non-otologic origin of the symptoms.

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Sex

All

Total final enrolment

40

Key exclusion criteria

1. Having TMD with otologic symptoms of otologic origins

Date of first enrolment

01/10/2024

Date of final enrolment

01/11/2024

Locations

Countries of recruitment

Syria

Study participating centre

Al-Sham private university ASPU, Faculty of Dentistry

Al Mazraa - next to Al Iman Mosque.

Damascus

Syria

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Sponsor information

Organisation

Al-Sham private university ASPU

Funder(s)

Funder type

Other

Funder Name

Investigator initiated and funded

Results and Publications

Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study will be available upon request from Dr. Samer Al Akkad. Email: Dr.samerakkad@gmail.com

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		26/05/2026	28/05/2026	Yes	No