

# Comparing 3 versus 7 days systemic administration of Amoxicillin (AMX) and Metronidazole (MET) in severe chronic periodontitis patients

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| <b>Submission date</b><br>09/06/2015   | <b>Recruitment status</b><br>No longer recruiting | <input type="checkbox"/> Prospectively registered<br><input type="checkbox"/> Protocol            |
| <b>Registration date</b><br>16/06/2015 | <b>Overall study status</b><br>Completed          | <input type="checkbox"/> Statistical analysis plan<br><input checked="" type="checkbox"/> Results |
| <b>Last Edited</b><br>10/07/2023       | <b>Condition category</b><br>Oral Health          | <input type="checkbox"/> Individual participant data  |

## Plain English summary of protocol

### Background and study aims

Chronic periodontitis is an inflammatory disease mainly initiated by bacteria residing in biofilms at and below the gingival margins. It affects the tissues surrounding the teeth involving progressive loss of the tooth supporting structures. Initial treatment includes the removal of bacterial deposits from the tooth structures through mechanical cleaning called scaling and root planning (SRP). Because bacteria are found in areas that hard to reach, SRP does not remove all bacteria and antibacterial agents (antibiotics and antiseptics) are also used. The aim of the present study is to evaluate the clinical outcomes following non-surgical periodontal therapy (performed within 24 hours) in conjunction with adjunctive Amoxicillin (AMX) and Metronidazole (MET) administered systemically for 3 and 7 days in patients with severe chronic periodontitis.

### Who can participate?

Adults over 30 with severe chronic periodontitis

### What does the study involve?

Participants are randomly allocated to one of three treatment groups:

- control group: non-surgical periodontal treatment (SRP) within 24 hours and dummy pills (3 times daily) for 7 days
- antibiotic group 1: SRP within 24h, then the following 3 days Amoxicilline and Metronidazole (both 500 mg 3 times daily), and then for another 4 days dummy pills (3 times daily)
- antibiotic group 2: SRP within 24h, then the following 7 days Amoxicilline and Metronidazole (both 500 mg 3 times daily)

### What are the possible benefits and risks of participating?

This is a low risk study. All participants receive periodontal treatment.

### Where is the study run from?

University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj Napoca (Romania)

When is the study starting and how long is it expected to run for?  
January 2012 to June 2015

Who is funding the study?  
University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj Napoca (Romania)

Who is the main contact?  
Dr Raluca Cosgarea

## Contact information

**Type(s)**  
Scientific

**Contact name**  
Dr Raluca Cosgarea

**Contact details**  
Str. Clinicilor nr 32  
Cluj-Napoca  
Romania  
400506

## Additional identifiers

**Protocol serial number**  
514/09.01.2012

## Study information

**Scientific Title**  
A randomized controlled clinical study on non-surgical periodontal treatment in conjunction with 3 versus 7 days systemic administration of Amoxicillin and Metronidazole in severe chronic periodontitis patients

**Acronym**  
AMX-MET

**Study objectives**  
The null hypothesis to be tested in this RCT is "no difference in the treatment effect regarding the difference in the number of deep pockets ( $PD \geq 6$  mm) for the systemic use of Amoxicillin and Metronidazole administered for 3 days compared with the administration of the same antibiotics for 7 days adjunctive to SRP".

**Ethics approval required**  
Old ethics approval format

**Ethics approval(s)**

## **Study design**

Single centre placebo controlled double masked randomized clinical interventional trial

## **Primary study design**

Interventional

## **Study type(s)**

Treatment

## **Health condition(s) or problem(s) studied**

Severe chronic periodontitis

## **Interventions**

All patients received oral hygiene instructions and cleanings.

Three treatment procedures were performed according to a computer generated randomisation list:

- control group: non-surgical periodontal treatment (scaling and root planing SRP) within 24 hours and placebo pills (3 times daily) for 7 days
- antibiotic group 1: SRP within 24h, then the following 3 days Amoxicilline (AMX) and Metronidazole (MET)- both for 500 mg (3 times daily), and then for another 4 days placebo pills (3 times daily)
- antibiotic group 2: SRP within 24h, then the following 7 days Amoxicilline (AMX) and Metronidazole (MET)- both for 500 mg (3 times daily)

All patients rinsed their mouths for the following 2 weeks with chlorhexidine digluconate 0.2% solution and used tooth paste with 0.2% chlorhexidine digluconate.

Clinical periodontal parameters (probing pocket depth, clinical attachment level, bleeding on probing, furcation involvement, full-mouth plaque score -FMPS-, gingival bleeding index -GBI), sulcus fluid for microbiological and immunological determinations were determined at baseline, at 2 weeks, at 3, 6 and 12 months after treatment.

Patients were asked about their compliance for the pills intake and adverse effects.

## **Intervention Type**

Drug

## **Phase**

Not Applicable

## **Drug/device/biological/vaccine name(s)**

Amoxicillin, metronidazole

## **Primary outcome(s)**

Difference of the number of sites per patient with pocket depth  $\geq 6$  mm between baseline and 6 months

## **Key secondary outcome(s)**

Secondary variables were changes in: probing pocket depth, clinical attachment level, bleeding on probing, furcation involvement, full-mouth plaque score -FMPS-, gingival bleeding index -GBI,

number of sites per patient with PD  $\geq$  6 mm, number of sites per patient  $\geq$  5 mm, bacterial load of *Aggregatibacter actinomycetemcomitans*, *Porphyromonas gingivalis*, *Tannerella Forsythia*, *Treponema denticola*, *Prevotella intermedia*, levels of IL-10, IL-1 $\beta$ , TNF-alpha, MMP-8.

**Completion date**

01/06/2015

## Eligibility

**Key inclusion criteria**

1. >30 years
2. Diagnosis of severe chronic periodontitis (Armitage 1999)
3.  $\geq$  12 natural teeth
4.  $\geq$  1 site/quadrant with pocket depth  $\geq$  6mm
5. Full-mouth plaque scores  $\leq$  25% (O`Leary 1972)
6. systemically healthy
7. No allergies for penicillin or 5-nitroimidazole derivatives

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

30 years

**Sex**

All

**Total final enrolment**

102

**Key exclusion criteria**

1. Non-surgical periodontal therapy within 12 months
2. Systemic/local antibiotics within the previous 3 months
3. Medication that could interact with amoxicilline or metronidazole
4. Pregnancy/lactation

**Date of first enrolment**

30/01/2012

**Date of final enrolment**

30/01/2014

## Locations

## Countries of recruitment

Romania

## Study participating centre

Clinic for Prosthodontics, University of Medicine and Pharmacy "Iuliu Hatieganu"

Str. Clinicilor nr 32

Cluj-Napoca

Romania

4000506

## Sponsor information

### Organisation

Department of prosthodontics, University of Medicine and Pharmacy "Iuliu Hatieganu"

### ROR

<https://ror.org/051h0cw83>

## Funder(s)

### Funder type

University/education

### Funder Name

Philipps University of Marburg (Germany)

## Results and Publications

### Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request

### IPD sharing plan summary

Available on request

### Study outputs

| Output type                     | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---------------------------------|---------|--------------|------------|----------------|-----------------|
| <a href="#">Results article</a> |         | 23/06/2016   | 26/11/2021 | Yes            | No              |
| <a href="#">Results article</a> |         | 29/06/2017   | 10/07/2023 | Yes            | No              |
| <a href="#">Results article</a> |         | 01/10/2020   | 10/07/2023 | Yes            | No              |