

# Macrogol versus lactulose in the treatment of constipation in pregnancy

<b>Submission date</b> 13/08/2020	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 18/08/2020	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 15/04/2024	<b>Condition category</b> Digestive System	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Chronic constipation is common, affecting up to 60.7% of pregnant women. It has a remarkable impact on quality of life in various aspects including discomfort, poor general health, and physical, psychological and social functions. To date, evidence is scarce with regards to the treatment of this disorder in pregnancy. Polyethylene glycol has been shown to be in favour as the first line of treatment of chronic constipation in the general population. This study aims to evaluate the effectiveness and tolerability of this drug in women with chronic constipation during their pregnancy.

### Who can participate?

Women in their third trimester of pregnancy with chronic constipation

### What does the study involve?

The study involves comparing polyethylene glycol (macrogol) and lactulose. Participants will be randomly allocated to receive one of the two treatments for up to 4 weeks. Participants answer a few questionnaires before starting the treatment and at the end of the treatment. Over the course of treatment, participants complete a bowel diary.

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

Possible benefits come from the treatment that will be given free of charge and at the same time will treat their symptoms according to the standard treatment of constipation. The possible adverse events that can occur include abdominal bloating, vomiting, flatulence and diarrhoea. At the moment, there are no reported severe adverse events with these two treatments.

### Where is the study run from?

University Malaya Medical Centre (Malaysia)

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

February 2020 to October 2022

Who is funding the study?  
University Malaya Medical Centre (Malaysia)

Who is the main contact?  
Azyyati binti Hassan  
atieasan@gmail.com

## Contact information

**Type(s)**  
Public

**Contact name**  
Dr Azyyati Hassan

**Contact details**  
Kompleks Wanita dan Kanak-Kanak  
University Malaya Medical Centre  
Kuala Lumpur  
Malaysia  
50603  
+60192854193  
atieasan@gmail.com

## Additional identifiers

**Clinical Trials Information System (CTIS)**  
Nil known

**ClinicalTrials.gov (NCT)**  
Nil known

**Protocol serial number**  
NMRR-20-1500-55812

## Study information

**Scientific Title**  
Randomized controlled trial: low dose polyethylene glycol (macrogol 4000) versus lactulose in the treatment of constipation in pregnancy

**Study objectives**  
Low dose polyethylene glycol (PEG) is more effective in the treatment of chronic constipation in pregnancy compared to lactulose.

**Ethics approval required**  
Old ethics approval format

**Ethics approval(s)**

Approved 11/8/2020, Medical Research Ethics Committee, University Malaya Medical Centre (Lembah Pantai, 59100 Kuala Lumpur, Malaysia; +6 (0)3 7949 3209/2251; ummc@ummc.edu.my), ref: 202071-8852

## **Study design**

Single-center Interventional open-labelled randomized controlled trial

## **Primary study design**

Interventional

## **Study type(s)**

Treatment

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

Constipation in pregnancy

## **Interventions**

Participants will be randomized via block randomization into either a group taking macrogol or a control group taking lactulose. Macrogol 4000 is given as one sachet a day (10 g) and can be adjusted up to two sachets a day. Lactulose is given as 15 ml a day (10 g) and can be adjusted up to 30 ml/day. Both are osmotic laxatives, taken in oral form. The duration of treatment is up to 4 weeks. Participants answer questionnaires before starting the treatment and at the end of the treatment. Over the course of treatment, participants will be given a bowel diary.

## **Intervention Type**

Drug

## **Phase**

Not Applicable

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

Macrogol 4000 (Forlax), Lactulose (duphalac)

## **Primary outcome(s)**

1. Number of women responding in terms of Complete Spontaneous Bowel Movements (CSBMs), defined as three or more Complete Spontaneous Bowel Movements (CSBMs) per week for at least 3 out of 4 weeks of total treatment, measured at baseline and week 4 of treatment
2. Number of women responding in terms of improvement in symptoms measured by PAC-SYM 12 items, where a response is defined by a decrease in score of  $\geq 1$  from the baseline, measured at baseline and week 4 of treatment

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

1. Tolerability in term of side effects over the course of treatment weeks:
  - 1.1. Side effects including vomiting, abdominal bloating, flatulence and diarrhoea, reported in bowel diary over the course of 4 weeks treatment and measured at week 4
  - 1.2. Diarrhoea defined by bowel movements more than three times a day with stool consistency measured using Bristol Score Chart score 6-7 reported in the bowel diary over the whole 4 weeks treatment and measured at week 4
2. Typical stool consistency measured using Bristol stool chart at baseline and at week 4 of treatment
3. The use of rescue treatment reported in the bowel diary over the course of 4 weeks

treatment and measured at week 4 of treatment

4. Discontinuation of treatment due to adverse effects reported in the bowel diary over the course of 4 weeks treatment, measured at week 4 of treatment

5. First bowel movement after the first administration reported in the bowel diary and measured at week 4 of treatment

6. Patient improvement of specific constipation symptoms following the three subscales in PAC-SYM 12-items at baseline and week 4 of treatment

7. Patient improvement in quality of life including satisfaction as measured by PAC-QOL 28-items at baseline and week 4 of treatment

### **Completion date**

15/10/2022

## **Eligibility**

### **Key inclusion criteria**

1. Pregnancy in the third trimester from 28-32 weeks (32 weeks defined by up to 32 weeks + 6 days)
2. Fulfil ROME IV criteria for chronic constipation
3. Consented for inclusion in the study
4. Have telephone access and agree to telephone interview

### **Participant type(s)**

Patient

### **Healthy volunteers allowed**

No

### **Age group**

Adult

### **Sex**

Female

### **Total final enrolment**

360

### **Key exclusion criteria**

1. Pre-existing gastrointestinal disease or surgery
2. Pre-existing medical diseases that can alter gastrointestinal functions (hypothyroidism, diabetes mellitus) and those suffering from severe liver, renal or cardiac diseases
3. Hypersensitivity to lactulose or polyethylene glycol
4. Persistent nausea or vomiting in pregnancy
5. Unable to give consent

### **Date of first enrolment**

25/08/2020

### **Date of final enrolment**

08/09/2022

# Locations

## Countries of recruitment

Malaysia

## Study participating centre

University Malaya Medical Centre

Lembah Pantai

Kuala Lumpur

Malaysia

50603

# Sponsor information

## Organisation

University Malaya Medical Centre

## ROR

<https://ror.org/00vkrxq08>

# Funder(s)

## Funder type

Hospital/treatment centre

## Funder Name

University Malaya Medical Centre

# Results and Publications

## Individual participant data (IPD) sharing plan

The datasets generated and/or analysed during the current study will be available upon request from the principal investigator (Azyyati Hassan; atieasan@gmail.com) after the overall trial end date. Datasets are confidential and any data sharing will have to go through the Medical Research Ethics Committees at University Malaya Medical Centre.

## IPD sharing plan summary

Available on request

## Study outputs

**Output type**  
[Results article](#)

**Details**

**Date created**  
23/02/2024

**Date added**  
15/04/2024

**Peer reviewed?**  
Yes

**Patient-facing?**  
No