

Clinical Trial Protocol

Iranian Registry of Clinical Trials

17 Sep 2026

The effect of probiotics on enteral milk tolerance and prevention of Necrotizing Enterocolitis in preterm infants hospitalization

Protocol summary

Study aim

milk tolerance at the beginning and end of the study in premature infants in the intervention group milk tolerance at the beginning and end of the study in premature babies in the control group the incidence of NEC in the two studied groups Comparison of milk tolerance in the two studied groups

Design

86 babies were divided into two control groups (receiver of placebo) and intervention (receiver of BB care) by random block method with the help of a computer program.)

Settings and conduct

Enteral feeding will begin within the first 24 hours of birth. For babies who were born less than or equal to 28 weeks and 6 days, feeding starts at the rate of half a cc/kg every two hours, and then at the rate of 15 cc /kg (daily or twice a day)) and finally reaches a daily intake of 60 cc per kilogram. For babies born less than 30 weeks, feeding will start at 15 cc per kilogram of body weight per 24 hours and increase to a maximum of 25 cc per kilogram of body weight per 24 hours on the second day and then It will be increased by 15 cc per kilogram of body weight twice a day

Participants/Inclusion and exclusion criteria

Inclusion criteria Gestational age <30 weeks Birth weight < 1500 grams Exit criteria Babies with gastrointestinal obstruction, CHD, amphalocele, gastroschisis, grade 2 and 3 asphyxia Babies of addicted mothers Not receiving enteral nutrition in the first 48 hours of birth Death of a premature baby Congenital and chromosomal malformations in the GIS of premature babies Active GIB in the first week after birth

Intervention groups

After the baby's feeding volume reaches 5 cc/kg/d, oral probiotics at the rate of one drop/kg with N/S up to a volume of 5. Diluted cc will be prescribed every 12 hours and in the control group: equivalent to 5/. CC of N/S will be prescribed every 12 hours

Main outcome variables

Prevention of necrotizing enterocolitis

General information

Reason for update

Acronym

NEC

IRCT registration information

IRCT registration number: **IRCT20141028019716N5**

Registration date: **2022-08-05, 1401/05/14**

Registration timing: **registered_while_recruiting**

Last update: **2022-08-05, 1401/05/14**

Update count: **0**

Registration date

2022-08-05, 1401/05/14

Registrant information

Name

Ghasem Bayani

Name of organization / entity

North Khorasan University of Medical Sciences

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-07-21, 1401/04/30

Expected recruitment end date

2023-01-15, 1401/10/25

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of probiotics on enteral milk tolerance and prevention of Necrotizing Enterocolitis in preterm infants hospitalization

Public title

The effect of probiotics on enteral milk tolerance and prevention of Necrotizing Enterocolitis in preterm infants hospitalization

Purpose

Prevention

Inclusion/Exclusion criteria**Inclusion criteria:**

Entry condition for pregnancy age below 30 weeks and birth weight less than 1500 grams

Exclusion criteria:

Babies with gastrointestinal obstruction, congenital heart disease, amphalocele, gastroschisis, grade 2 and 3 asphyxiaCommunity Verified icon Babies of addicted mothers(Because one of the problems of babies born to addicted mothers is digestive problems such as feeding intolerance and abdominal distention and diarrhea, which can overlap with the symptoms of necrotizing enterocolitis).Community Verified icon Failure to receive enteral nutrition in the first 48 hours of birth Death of a premature baby Congenital and chromosomal malformations in the digestive system of premature babies Active gastrointestinal bleeding in the first week after birth

Age

From **168 months** old to **210 days** old

Gender

Both

Phase

3

Groups that have been masked

- Participant
- Care provider
- Investigator
- Outcome assessor
- Data analyser
- Data and Safety Monitoring Board

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

According to the size of the samples, 30 babies will be identified by random block method with 4 blocks and using random numbers table of Random Allocation Software. Blocking and allocation sequence for concealment will be done by a person not involved in the research. The allocation ratio of the samples will be 1:1 and it will be divided into two groups receiving the product of biofermentation company and the control group. This study is double-blind and blinding will take

place

Blinding (investigator's opinion)

Double blinded

Blinding description

Before the start of the study, solution A and B will be provided to the study administrator by Biot Khamtir, who will be the participant, researcher, healthcare personnel (doctors, nurses), clinical supervisor, and outcome evaluator until the end of the study. Except for the manufacturer of the solution, they are blind and do not know which of the mentioned solutions is drug or non-drug.

Placebo

Used

Assignment

Parallel

Other design features

In the clinical trial studies, using the tables for the preparation of samples, considering five items, which include: 1- The difference in treatment responses that should be taken 2- The estimation of the amount of treatment responses in one of the groups under research 3- The amount of significant difference Statistics (α), 4- the desired strength of the research (β -1) and 5- whether the experiment is one-sided or two-sided, the sample size in each group is estimated. In this study, the researcher expects a 30% difference in milk tolerance in the two intervention and control groups, and considering the 10% milk tolerance [R1] in the control group and considering the type 1 error (α) of 0.05 and the power of the study (β -1) 80% and taking into account one-sided tests in examining the difference and relationship between groups, the sample size is 30 people in each group and taking into account 30% dropout ($n \times 0.1.1.3$), 43 people will be examined in each group.

Secondary Ids

empty

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

Research Ethics Committee of North Khorasan
University of Medical Sciences

Street address

honar Street, Bent Al Hadi Hospital

City

bojnurd

Province

North Khorasan

Postal code

9417645445

Approval date

2022-06-26, 1401/04/05

Ethics committee reference number

IR.NKUMS.REC.1401.021

Health conditions studied

1

Description of health condition studied

and prevention of Necrotizing Enterocolitis in preterm

ICD-10 code

P77.9

ICD-10 code description

Necrotizing enterocolitis in newborn, unspecified

Primary outcomes

1

Description

Prevention of necrotizing enterocolitis

Timepoint

When a premature baby is hospitalized

Method of measurement

Definitive diagnosis of necrotizing enterocolitis by a neonatologist

Secondary outcomes

1

Description

1. Duration of hospitalization

Timepoint

Weight of premature baby at admission and at discharge

Method of measurement

The weight of the premature baby is in grams at the time of hospitalization And the time is based on hours and minutes and Increase in head circumference based on centimeters

Intervention groups

1

Description

intervention group: After the baby's feeding volume reaches 5 cc/kg/d, oral probiotics from Bio Fermentation Company at the rate of one drop per kilogram of body weight with normal saline solution up to a volume of 5. cc diluted, administered every 12 hours

Category

Prevention

2

Description

In the control group: Only equivalent to 5/. CC of normal saline solution was administered every 12 hours.

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Bentolhoda Hospital

Full name of responsible person

Ghasem Bayani

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Bojnourd University of Medical Sciences

Full name of responsible person

DR.Javad Pournaghi

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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

Bojnourd 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
Bojnourd University of Medical Sciences
Full name of responsible person
Dr. Ghasem Bayani
Position
MD, pediatrician
Latest degree
Subspecialist
Other areas of specialty/work
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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

Need for more studies

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Not applicable

Data Dictionary

No - There is not a plan to make this available

Title and more details about the data/document

In double-blind randomized studies, the use of random sampling methods is not very important, and in these studies, based on the available cases, a method called randomization is used to investigate the causality, so that the two groups are similar in terms of intervening factors and The effect of the intended intervention can be easily checked. In this study, out of all the premature babies admitted to the hospital, taking into account the entry and exit criteria, 86 babies were allocated to two control groups (receiver of placebo) and intervention (receiver of BB care probiotic) by random block method with the help of a computer program. they did; It should be noted that the manufacturer of both groups (control and intervention) is bio-fermentation, which by providing

two solutions A and B, until the end of the project, the nature of the solutions (drug and placebo) is unknown even to the project manager. In this study, the doctors involved (specialist neonatologists working in Bent Al-Hadi Hospital who are responsible for treatment from the beginning to the end) in the study and the statistical analyzer will not have knowledge of the type of milk that was given to the babies. Output data and consent letters will be according to the protocol and regulations of the National Ethics Committee

When the data will become available and for how long

After completing the study and final approval by the research team

To whom data/document is available

All the information of the participants in the research will remain completely confidential and the results of the research will be published

Under which criteria data/document could be used

All the information of the participants in the research will

remain completely confidential and the results of the research will be published and it will be done to receive specific data from the researcher and in compliance with the protocols of the National Ethics Committee.

From where data/document is obtainable

All the information of the participants in the research will remain completely confidential and the results of the research will be published and it will be done to receive specific data from the researcher and in compliance with the protocols of the National Ethics Committee.

What processes are involved for a request to access data/document

First, the request by the person who needs the data will first be given to the research assistant of the university, and after approval by the ethics committee of the university and the researcher, it will be given to the desired person.

Comments

All protocols and regulations of the National Ethics Committee and University Ethics Council will be observed