Clinical Trial Protocol
Iranian Registry of Clinical Trials

19 Jul 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

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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*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