

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jun 2026

Comparing the effect of intermittent versus continuous phototherapy for reducing neonatal hyperbilirubinemia in Besat hospital of Hamedan.

Protocol summary

Summary

The goal of this study was to compare the effect of intermittent versus continuous phototherapy to reduce neonatal hyperbilirubinemia. In this prospective randomized trial, 96 neonates with hyperbilirubinemia who were admitted to Neonatal ward of Besat Hospital in Hamedan, Iran, were assigned into the two following groups. The neonates in the first group received continuous phototherapy (2 hours on, 0.5 hours off) while in the second group received intermittent phototherapy (1 hours on, 1 hour off). Phototherapy units were equipped with 4 special blue tubes (Tosan Co) Placed 15-20 cm above the neonate's body to produce an average irradiance of 20 mw /cm² /nm at 420-470 nm, The neonate's total serum bilirubin level was measured every 12 hours after starting phototherapy and compared between groups.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201012255459N1**

Registration date: **2011-02-10, 1389/11/21**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2011-02-10, 1389/11/21

Registrant information

Name

Kamran Sabzian

Name of organization / entity

Hamedan University of Medical Sciences and Health Services

Country

Iran (Islamic Republic of)

Phone

+98 81 1264 0050

Email address

k.sabzian@umsha.ac.ir

Recruitment status

Recruitment complete

Funding source

Hamedan University of Medical Sciences and Health Services

Expected recruitment start date

2009-08-22, 1388/05/31

Expected recruitment end date

2010-08-22, 1389/05/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparing the effect of intermittent versus continuous phototherapy for reducing neonatal hyperbilirubinemia in Besat hospital of Hamedan.

Public title

Comparing the effect of intermittent versus continuous phototherapy for reducing neonatal icter.

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: neonate between 2-14 day old, body weight more than 2500 grams, absence of other concomitant diseases, bilirubin between 16mg/dl and 22 mg/dl, obtaining approval letter from the ethics committee Exclusion criteria: body weight under 2500 grams, presence of any concomitant diseases, need to blood exchange, need to intensive phototherapy, gestational age lower than 37 weeks, prolonged icterus

(more than 14 day), direct bilirubin more than 2 mg/dl

Age

From 2 years old to 14 years old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 96

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Hamedan University of Medical Sciences and Health Services

Street address

Opposite Mardom park, Abbas abad St., Hamedan

City

Hamedan

Postal code

Approval date

2009-08-08, 1388/05/17

Ethics committee reference number

67853/9/35/16/پ

Health conditions studied

1

Description of health condition studied

Neonatal jaundice

ICD-10 code

P59

ICD-10 code description

Neonatal jaundice from other and unspecified causes

Primary outcomes

1

Description

Indirect bilirubin

Timepoint

12, 24, 36, 48 hours after beginning of phototherapy

Method of measurement

mg/dl

Secondary outcomes

empty

Intervention groups

1

Description

Intermittent phototherapy group received phototherapy for one hour and then one hour off intermittently.

Phototherapy units were equipped with 4 special blue tubes (Tosan Co), placed 15-20 cm above the infant's body to produce an average irradiance of 20 mw /cm² /nm at 420-470 nm. This cycle was done for 48 hour.

Category

Treatment - Other

2

Description

Continuous phototherapy group (control group) received phototherapy for two hours and then half an hour off.

Phototherapy units were equipped with 4 special blue tubes (Tosan Co) placed 15-20 cm above the infant's body to produce an average irradiance of 20 mw /cm² /nm at 420-470 nm. This cycle was done for 48 hour.

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Besat Hospital of Hamedan University of Medical Sciences

Full name of responsible person

Kamran Sabzian

Street address

Besat Hospital, Besat street, Hamedan, Iran

City

Hamedan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Hamedan University of Medical Sciences and Health Services

Full name of responsible person

Kamran Sabzian

Street address

Besat Hospital, Besat St, Hamedan

City

Hamedan

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Hamedan University of Medical Sciences and Health Services

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

empty

Person responsible for general inquiries

Contact

Name of organization / entity

Hamedan University of Medical Sciences and Health Services

Full name of responsible person

Kamran Sabzian

Position

Resident

Other areas of specialty/work

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Web page address

Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty