

The efficacy of diquafosol eyedrops in dry eye syndrome

Submission date 03/05/2014	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 27/05/2014	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 27/05/2014	Condition category Eye Diseases	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

Dry eye disease occurs when the eyes do not make enough tears or the tears evaporate too quickly, leading to the eyes drying out and becoming inflamed (red and swollen) and irritated. Our goal is to compare the effectiveness of preservative-free sodium hyaluronate and diquafosol combination treatment, treatment with diquafosol alone and preserved sodium hyaluronate alone in treating dry eye disease.

Who can participate?

Patients aged over 21 with dry eye disease can take part in this study.

What does the study involve?

Patients were randomly allocated to one of three groups: Group 1 (50 patients) was treated with preserved sodium hyaluronate, Group 2 (50 patients) with diquafosol, and Group 3 (50 patients) with diquafosol and preservative-free sodium hyaluronate eyedrops for 3 months. We will perform various tests and laboratory measurements at the start of the study and 1, 2, and 3 months after the treatment.

What are the possible benefits and risks of participating?

Treatment of dry eye syndrome will relieve dry eye symptoms. There are no risks involved in this study.

Where is the study run from?

Bucheon St. Mary's Hospital (South Korea).

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

Recruitment started in early 2013. Participants were enrolled on the study for a period of 6 months between May 2013 and December 2013.

Who is funding the study?

National Research Foundation of Korea (NRF) (South Korea).

Who is the main contact?

Professor Eun Chul Kim

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Contact information

Type(s)

Scientific

Contact name

Prof Eun Chul Kim

Contact details

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Additional identifiers

Protocol serial number

N/A

Study information

Scientific Title

Additive effect of preservative-free sodium hyaluronate 0.1% in treatment of dry eye syndrome with diquafosol 3% eyedrops

Study objectives

Preservative-free lubricants can augment the treatment effect of diquafosol by enhancing ocular surface stabilization.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Institutional review board regulations (IRB) of Bucheon St Mary's Hospital

Study design

Prospective randomized controlled parallel-group study, 14/02/2011, NO: HC11RIM10003

Primary study design

Interventional

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Dry eye syndrome

Interventions

Participants were randomized to one of the following three groups:

Group 1 (50 patients, 50 eyes) were treated with preserved sodium hyaluronate 0.1% eyedrops (Lacure, Samil, Seoul, Korea) (four times a day) in the 1, 2 and 3 months

Group 2 (50 patients, 50 eyes) were treated with diquafosol 3% eyedrops (four times a day) in the 1, 2 and 3 months

Group 3 (50 patients, 50 eyes) were treated with diquafosol 3% and preservative-free sodium hyaluronate 0.1% eyedrops (Tearin free, DHP Korea, Seoul, Korea) (four times a day) in the 1, 2 and 3 months

Intervention Type

Other

Phase

Not Applicable

Primary outcome(s)

1. Ocular surface disease index (OSDI) scoring
2. tBUT
3. Schirmer I test (without anesthesia)

All outcomes were measured before treatment and at 1, 2 and 3 months after the start of treatment.

Key secondary outcome(s)

1. Corneal fluorescein staining
2. Conjunctival impression cytology

All outcomes were measured before treatment and at 1, 2 and 3 months after the start of treatment.

Completion date

01/12/2013

Eligibility

Key inclusion criteria

1. Low tear film break-up time (tBUT) (<5 seconds)
2. Low Schirmer I score (10 mm/5 minutes without anesthesia)
3. Mild corneal punctate fluorescein staining (staining score of ≥ 1) in either eye (scale 0 ~ 3)
4. At least 21 years old

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Sex

All

Key exclusion criteria

1. History of ocular injury, infection, non-dry eye ocular inflammation, trauma, or surgery within the prior 6 months
2. Presence of uncontrolled systemic disease

Date of first enrolment

01/05/2013

Date of final enrolment

01/12/2013

Locations**Countries of recruitment**

Korea, South

Study participating centre**Department of Ophthalmology**

Bucheon

Korea, South

420-717

Sponsor information**Organisation**

Bucheon St Mary's Hospital (South Korea)

ROR

<https://ror.org/01fpnj063>

Funder(s)**Funder type**

Research organisation

Funder Name

National Research Foundation of Korea (NRF) (South Korea)

Alternative Name(s)

, National Research Foundation (South Korea), NRF

Funding Body Type

Private sector organisation

Funding Body Subtype

Trusts, charities, foundations (both public and private)

Location

Korea, South

Results and Publications

Individual participant data (IPD) sharing plan**IPD sharing plan summary**

Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes