

Comparing sodium hyaluronate effects on eye moisture after cataract surgery

Submission date 10/08/2023	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 25/08/2023	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
Last Edited 31/07/2024	Condition category Eye Diseases	<input type="checkbox"/> Individual participant data

Plain English Summary

Background and study aims

Cataracts are when the lens of your eye, a small transparent disc, develops cloudy patches. Cataract surgery involves replacing the cloudy lens inside the eye with an artificial one. Postoperative Dry Eye Syndrome (DES) often occurs after cataract surgery. Sodium hyaluronate eye solution is a common treatment for dry eye syndrome after cataract surgery. The aim of this study is to compare the efficacy of 0.15% sodium hyaluronate eye drops in MGD dysfunction and dry eye syndrome after cataract surgery in comparison with 0.1% sodium hyaluronate eye drops.

Who can participate?

Adult cataract patients with normal lid position and closure and not suffering from any eye diseases

What does the study involve?

Participants will be randomly allocated to use 0.15% or 0.1% sodium hyaluronate eye drops for 6 weeks following cataract surgery. Eye assessments are performed at each visit 1 week before and 1, 3, 6 weeks after surgery.

What are the possible benefits and risks of participating?

There may be no risks or benefits for the participants. The eye drops are commercially available and have proven clinical safety.

Where is the study run from?

Pusan National University School of Medicine (South Korea)

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

February 2022 to December 2023

Who is funding the study?

Pusan National University Yangsan Hospital (South Korea)

Who is the main contact?
Dr Seungahn Yang
yangggoggo@naver.com

Contact information

Type(s)

Scientific

Contact name

Dr Seungahn Yang

ORCID ID

<http://orcid.org/0009-0000-2818-5172>

Contact details

Pusan National University School of Medicine
20-Geumo-ro
Mulgeum-eup
Yangsan
Korea, South
50612
+82 (0)55 360 1447
yangggoggo@naver.com

Additional identifiers

EudraCT/CTIS number

Nil known

IRAS number

ClinicalTrials.gov number

Nil known

Secondary identifying numbers

Nil known

Study information

Scientific Title

Efficacy of 0.15% sodium hyaluronate on tear breakup time (TBUT), Schirmer's I test score, ocular surface disease index (OSDI) score, corneal staining score (CSS), lipid layer thickness (LLT) and meiboscore after cataract surgery: a randomized, double-masked study

Study hypothesis

0.15% sodium hyaluronate might improve ocular surface status and dry eye syndrome in comparison with 0.1% sodium hyaluronate after cataract surgery.

Ethics approval required

Ethics approval required

Ethics approval(s)

Approved 06/05/2022, Pusan National University Yangsan Hospital Institutional Review Board (#20 Geumo-ro, Mulgeum-eup, Yangsan, 50612, Korea, South; +84 55 360 3854; pnyhirb@gmail.com), ref: 05-2022-084

Study design

Prospective randomized double-masked comparative clinical trial

Primary study design

Interventional

Secondary study design

Randomised parallel trial

Study setting(s)

Hospital

Study type(s)

Treatment

Participant information sheet

Not available in web format, please use the contact details to request a patient information sheet.

Condition

Dry eye syndrome, meibomian gland dysfunction

Interventions

Patients are randomized using the random number method into two treatment groups.

The first group will use 0.15% sodium hyaluronate ophthalmic solution (Hyalu Mini®, Hanmi Pharma Inc., Seoul, Korea) 4 times daily over 6 weeks following cataract surgery.

The second group receive standard postoperative treatment with 0.1% sodium hyaluronate (HyalQ, Ildong Pharmaceutical Inc., Seoul, Korea)

Eye assessments are performed at each visit 1 week before and 1, 3, 6 weeks after surgery.

Intervention Type

Drug

Pharmaceutical study type(s)

Dose response

Phase

Not Applicable

Drug/device/biological/vaccine name(s)

0.15% sodium hyaluronate ophthalmic solution (Hyalu Mini®, Hanmi Pharma Inc., Seoul, Korea)

0.1% sodium hyaluronate (HyalQ, Ildong Pharmaceutical Inc., Seoul, Korea)

Primary outcome measure

Measured at baseline (1 week before cataract surgery) and 1, 3, 6 weeks after cataract surgery:

1. Ocular surface status parameters:

1.1. Lipid layer thickness (LLT) measured using an interferometer

1.2. Schirmer's type I test using COLOR BAR by Eagle Vision Inc.

1.3. Tear breakup time (TBUT), corneal staining score(CSS), meiboscore were measured by an ophthalmologist

2. Patients' symptoms measured using Ocular Surface Disease Index (OSDI) questionnaire

Secondary outcome measures

There are no secondary outcome measures

Overall study start date

06/05/2022

Overall study end date

31/12/2023

Eligibility

Participant inclusion criteria

1. Be male or female, aged 19 years to 90 years

2. Have a tear breakup time (TBUT) of 10 seconds or more

3. Have a Schirmer's I test result of 10 mm or more

4. Have not used diquafosol-based eye drops, artificial tear drops, steroid eye drops, or antibiotic eye drops within 3 months before participation

5. Show normal blinking during a slit lamp exam

6. Voluntarily agree to participate in this study

Participant type(s)

Patient

Age group

Adult

Lower age limit

19 Years

Upper age limit

90 Years

Sex

Both

Target number of participants

60

Total final enrolment

70

Participant exclusion criteria

1. Has Sjögren's syndrome
2. Has severe blepharitis
3. Had ocular surgery or laser eye surgery
4. Has severe ocular inflammation/infection
5. Is using eye drop treatment for dry eyes, such as glaucoma or allergies
6. Shows sensitivity to the study drugs
7. Is considered to be ineligible for participation owing to reasons other than the aforementioned exclusion criteria based on the judgment of the principal researcher

Recruitment start date

11/05/2022

Recruitment end date

30/11/2022

Locations**Countries of recruitment**

Korea, South

Study participating centre

Pusan National University School of Medicine,
Department of Ophthalmology
20-Geumo-ro
Mulgeum-eup
Yangsan
Korea, South
50612

Sponsor information**Organisation**

Pusan National University Yangsan Hospital

Sponsor details

20-Geumo-ro Mulgeum-eup
Yangsan
Korea, South
50612
+82 (0)55 360 1447
jjel75@hanmail.net

Sponsor type

Hospital/treatment centre

Website

<http://www.pnuyh.or.kr/pnuh/main/main.do?rbsIdx=1>

ROR

<https://ror.org/04kkg1090>

Funder(s)

Funder type

Hospital/treatment centre

Funder Name

Pusan National University Yangsan Hospital

Results and Publications

Publication and dissemination plan

Planned publication in a high-impact peer-reviewed journal.

Intention to publish date

04/10/2023

Individual participant data (IPD) sharing plan

The data-sharing plans for the current study are unknown and will be made available at a later date.

IPD sharing plan summary

Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		30/07/2024	31/07/2024	Yes	No