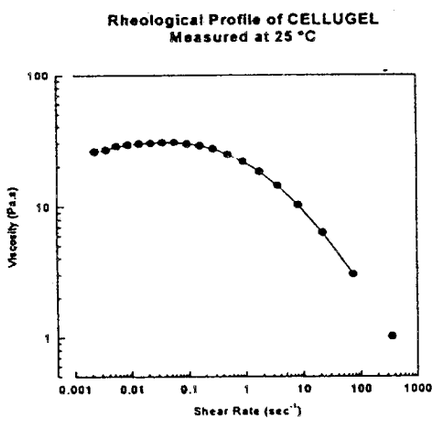
CELLUGEL®

OPHTHALMIC VISCOSURGICAL DEVICE

(2% Hydroxypropyl Methylcellulose)

DESCRIPTION:

CELLUGEL® Ophthalmic Viscosurgical Device (OVD) is a sterile, nonpyrogenic, noninflammatory viscoelastic solution of highly purified non-proteinaceous 2% hydroxypropyl methylcellulose (HPMC) with an average molecular weight of 300,000 daltons dissolved in an isotonic, physiological buffer. Each mL of CELLUGEL contains 2% HPMC, 0.525% sodium chloride, 0.075% potassium chloride, 0.048% calcium chloride, 0.03% magnesium chloride, 0.39% sodium acetate, 0.17% sodium citrate, and water for injection. The osmolarity of CELLUGEL is 315 ± 35 mOsM, the pH 7.2 ± 0.4, and the viscosity 30,000 ± 10,000 mPa.s (cps) (at 0.2 sec^{-1}, 25°C).



INDICATIONS

CELLUGEL is indicated for use during surgery in the anterior segment of the eye. It is designed to create and maintain space, to protect the corneal endothelium and other intraocular tissues and to manipulate tissues during surgery. It may also be used to coat intraocular lenses and instruments during cataract extraction and IOL insertion.

CONTRAINDICATIONS

At present, there are no known contraindications to the use of CELLUGEL when used as recommended.

PRECAUTIONS

Precautions are limited to those normally associated with the surgical procedure being performed. As with all ophthalmic viscosurgical devices, a transient rise in IOP in the early postoperative period has been reported in some cases. It is therefore recommended that CELLUGEL be removed from the anterior chamber by thorough irrigation and/or aspiration at the end of surgery to minimize post-operative intraocular pressure increases. Intraocular pressure should be monitored postsurgically and appropriate therapy instituted if significant increases occur. Do not overfill the anterior chamber. In addition to the above, the following precautions should be observed:

- Do not reuse cannulas.
- Use only if material is clear.
- Avoid trapping air bubbles within CELLUGEL before injection.
- **This Product Contains Dry Natural Rubber.**

ADVERSE REACTIONS

In two clinical studies, 348 patients were treated with CELLUGEL and 344 patients were treated with a control Ophthalmic Viscosurgical Device (Healon®*). The incidences of ophthalmic adverse events that were reported in ≥ 1% of the patients are shown in Table 1.

Table 1
Adverse Events

Observation	Treatment	Study 1[a]		Study2[b]	
		N	%	N	%
External Slit-lamp Observations[c]	Cellugel	110	55.3	3	2.0
	Healon	87	44.2	1	0.7
Posterior Capsule Haze	Cellugel	94	47.2	13	8.7
	Healon	87	44.2	13	8.8
Intraocular Slit-lamp Observations[d]	Cellugel	70	35.2	-	-
	Healon	80	40.8	-	-
Macular Degeneration	Cellugel	34	17.1	17	11.4
	Healon	34	17.3	20	13.6
Lid Observations[e]	Cellugel	34	17.1	2	1.3
	Healon	35	17.9	1	0.7
Posterior Segment Observations[f]	Cellugel	26	13.1	2	1.3
	Healon	24	12.2	4	2.7
Nd: YAG posterior Capsulotomy	Cellugel	20	10.1	-	-
	Healon	11	5.6	-	-
Dry Eye[g]	Cellugel	11	5.5	5	3.4
	Healon	8	4.1	2	1.4
Iris Atrophy	Cellugel	10	5.0	-	-
	Healon	6	3.1	-	-
Macular Edema	Cellugel	9	4.5	1	0.7
	Healon	8	4.1	3	2.0

		Study 1[a]		Study2[b]	
Secondary Glaucoma	Cellugel	6	3.0	-	-
	Healon	5	2.6	-	-
Hyphema	Cellugel	5	2.5	-	-
	Healon	2	1.0	-	-
IOL repositioning or exchange	Cellugel	4	2.0	-	-
	Healon	2	1.0	-	-
Intraocular pressure >40 mmHg	Cellugel	3	1.5	6	4.0
	Healon	2	1.0	8	5.4
Vitreous in the Anterior Chamber	Cellugel	2	1.0	1	0.7
	Healon	4	2.0	-	-
Endothelial Damage	Cellugel	2	1.0	3	2.0
	Healon	-	-	3	2.0
Cells (AC cells ≥ grade 3)	Cellugel	-	-	2	1.3
	Healon	-	-	-	-
Corneal Edema (≥ grade 3)	Cellugel	-	-	1	0.7
	Healon	-	-	2	1.4
Nd: YAG anterior synechiolysis	Cellugel	2	1.0	-	-
	Healon	1	0.5	-	-
Retina procedure	Cellugel	2	1.0	-	-
	Healon	4	2.0	-	-
Lid procedure	Cellugel	2	1.0	-	-
	Healon	3	1.5	-	-
Conjunctival cyst or filament removal	Cellugel	2	1.0	-	-
	Healon	-	-	-	-
Subjective complaints[h]	Cellugel	-	-	6	4.0
	Healon	-	-	7	4.8

[a] Study 1: CELLUGEL, N=199; HEALON, N=196 (One HEALON patient did not return for follow-up).
[b] Study 2: CELLUGEL, N=149; HEALON, N=147.
[c] Includes conjunctival injection, conjunctival hemorrhage, superficial punctate keratitis, ecchymosis, arcus senilus, conjunctival chemosis, pinguecula, subconjunctival hemorrhage, hyperemia, conjunctival gape, corneal abrasion.
[d] Includes corneal folds, Descemets folds, endothelial folds, striae, guttata, trace endothelial changes, cortical remnants, endothelial pigment, endothelial debris, microcystic corneal edema.
[e] Includes blepharitis, dermatochalasis, lid edema, ptosis, collarettes, chalazion.
[f] Includes posterior capsular folds/wrinkling, retinal pigment epithelial changes, posterior vitreous detachment.
[g] Includes poor tear film.
[h] Includes foreign body sensation, ocular pain, diplopia.

Other ophthalmic adverse events considered unrelated to use of the OVD and occurring among patients at a rate of < 1% included: eye discomfort, IOL membrane, puritus, retinal hemorrhage, blurred vision, IOL repositioning with vitrectomy, removal of residual lens cortex, and foreign body removal.

CLINICAL STUDIES

In two controlled, randomized, multicenter clinical studies, 348 patients were treated with CELLUGEL and 344 patients were treated with Healon. A total of 396 patients were enrolled in Study 1 with cell density as the primary endpoint measured at baseline and at the final 6 month visit. Patients who presented with low cell densities were not evaluated. Study 2 was designed to specifically address intraocular pressure elevation during the expected peak period at 6 hours postsurgery with a 21 day follow-up. No prophylactic medications were administered to patients in Study 2 prior to the 6-hour IOP measurement. CELLUGEL and Healon were shown to be clinically equivalent in their effects on postoperative intraocular pressure, based on a statistical test of non-inferiority.

Table 2

Change in Endothelial Cell Density (cells/mm^2 ± SEM) at 6 months (Study 1)

OVD	Cell Density Change	Percent Change
Cellugel (n=138)	-119 ± 44.3	-3.6%
Healon (n=130)	-135 ± 45.2	-3.8%

Table 3

Frequency of Patients with IOP ≥ 30 mm Hg

	Time Interval		
	Study 1[a]	Study 2	
OVD	24 Hours	6 Hours	24 Hours
Cellugel	11.1% (n=8/72)	15.8% (n=22/139)	4.3% (n=6/140)
Healon	9.1% (n=7/77)	12.2% (n=17/139)	8.6% (n=12/140)

[a] This is a subgroup including only nonglaucoma patients who did not receive a prophylactic IOP reducing medication prior to the 24 hour exam.

Table 4

Mean IOP Change from Baseline (mmHg ± SEM)

	Time Interval		
	Study 1[a]	Study 2	
OVD	24 Hours	6 Hours	24 Hours
Cellugel	3.0 ± 0.74 (n=72)	7.22 ± 0.69 (n=139)	3.64 ± 0.39 (n=140)
Healon	3.0 ± 0.82 (n=77)	5.71 ± 0.66 (n=139)	3.49 ± 0.51 (n=140)

[a] This is a subgroup including only nonglaucoma patients who did not receive a prophylactic IOP reducing medication prior to the 24 hour exam.

HOW SUPPLIED

CELLUGEL is a sterile, nonpyrogenic, single-use, ophthalmic viscosurgical device, supplied in a disposable syringe delivering 1.0 mL, packaged in a sterile peel pouch, and is terminally sterilized by autoclaving. A sterile, disposable, blunt-tipped cannula is provided.

DIRECTIONS FOR USE

FOR INTRAOCULAR USE ONLY. BOTH CELLUGEL AND CANNULA ARE FOR SINGLE-USE ONLY. The syringe assembly is designed only for the injection of the CELLUGEL ophthalmic viscosurgical device it contains. Use of the syringe assembly for aspiration is not advised.

1. Using sterile technique, peel open the pouch containing the sterile syringe or cannula and drop the contents onto a sterile field.
2. Remove cap from syringe tip.
3. It is recommended that the cannula hub be filled with balanced salt solution prior to attaching the cannula to the syringe in order to minimize the introduction of air bubbles into the anterior chamber.
4. Firmly attach the cannula to the tip of the syringe.
5. Remove plastic cartridge from cannula.
6. Purge the remaining air from the system by holding the syringe barrel with one hand and gently depressing the plunger rod with the other hand until CELLUGEL appears at the cannula tip.

CELLUGEL ophthalmic viscosurgical device should be carefully injected into the anterior chamber prior to capsulotomy using standard aseptic techniques. CELLUGEL may be injected into the chamber prior to or following removal of the crystalline lens. Instillation of CELLUGEL prior to lens removal will provide protection to the corneal endothelium from possible damage due to surgical instrumentation during cataract surgery. Additional CELLUGEL may be injected during anterior segment surgery to fully maintain the chamber or replace any volume lost during the surgical procedure.

STORE AT ROOM TEMPERATURE 15° - 30° C (59° - 86° F)
PROTECT FROM FREEZING AND LIGHT.
DO NOT USE THIS PRODUCT AFTER THE EXPIRY DATE WHICH IS PROVIDED ON THE SYRINGE, POUCH, AND CARTON.

STERILE

Caution: Federal (USA) law restricts this device to sale by, or on the order of, a physician.

*Healon® is a registered trademark of Pharmacia & Upjohn Company.

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