User study of MistGo® A user-friendly alternative to conventional eye drops

Conducted by Design Psychology 2023 (independent usability testing consultancy)

EYEGO

Background[1]

- Of the routes to administer drugs to the eye to treat chronic eye diseases such as dry eye disease (DED) and glaucoma, the topical route is the most used. Unfortunately, the design of the eye drop bottle leads many patients to administer their medication incorrectly.
- Studies prove that among glaucoma patients, the proportion of patients using improper technique ranges from 34% to 92%. 7-44% miss the eye completely and 18-80% contaminate the tip of the bottle by contacting the eye or surrounding tissue.
- Poor instillation technique jeopardizes adherence and compliance to treatment.

MistGo® user-friendly design

- MistGo® is an innovative alternative to the conventional eye drop bottle, designed to help patients administer their eye medication in a more precise and user-friendly way.
- The better user experience translates into higher patient compliance, healthier eyes and higher quality of life for patients.

MistGo® is designed to be omnidirectional – it can be used horizontally

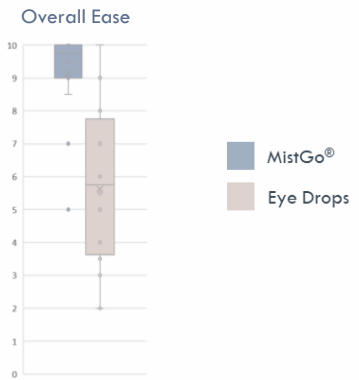
Purpose & Methods

- **Purpose:** to collect data regarding the experience of using conventional eye drop bottles vs using MistGo® to self-administer eye medication. Focus areas were ease of use, dosing self-efficacy, intended adherence/compliance and preference/reaction.
- **Method:** the study was conducted as a separate part in connection to a pre-validation usability test and contains the same 16 participants, all having experience using conventional eye drop bottles. Participants had the option to try MistGo® four times - twice during the usability test and twice during the user study. As the devices were not sterilized for the test, participants were instructed to wear safety goggles before administering. They also administered doses on their arm to feel the MistGo® -sensation.

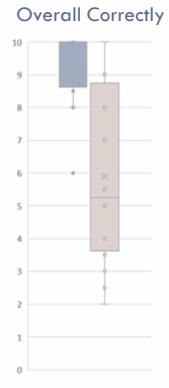
Results and Conclusions

MistGo® offers patients significant advantages over conventional bottles

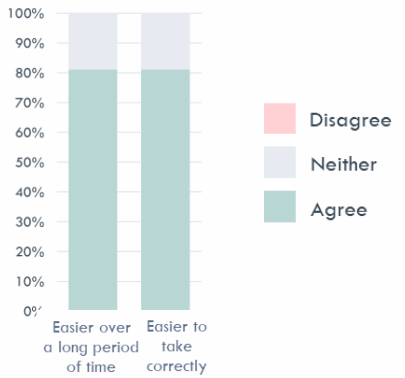
Ease of use: 88% rated MistGo® higher on ease of use on 5 aspects of correct self-administration



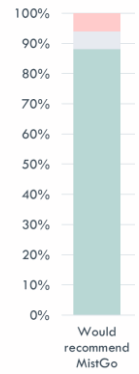
Dosing self-efficacy: 81% felt more certain they could take eye medication correctly with MistGo®



Treatment adherence: 81% believed MistGo® would make it easier to adhere to treatment



Preference: 88% would recommend MistGo® to others taking eye medication



1: Atey TM et al, "The impact of adherence and instillation proficiency of topical glaucoma medications on intraocular pressure". J Ophthalmoly, 2017, Vol 2017, Article 1683430; Schein OD et al, "Microbial contamination of in-use ocular medications". Arch Ophthalmol, 1992, Vol 110, pp 82–85; Sleath B, Blalock S, Covert D et al, "The relationship between glaucoma medication adherence, eye drop technique, and visual field defect severity". Ophthalmology, 2011,Vol 118, pp 2398–2402; Gupta R et al, "Evaluating eye drop instillation technique in glaucoma patients". J Glaucoma, 2012,Vol 21, pp 189–192; Tatham AJ et al, "Eye drop instillation technique in patients with glaucoma". Eye, 2013,Vol 27 pp 1293–1298; Konstas AG et al, "Compliance and viewpoint of glaucoma patients in Greece". Eye, 2000, Vol 14,pp 752–756; Kholdebarin R et al, "Multicenter study of compliance and drop administration in glaucoma". Can J Ophthalmology, 2008,Vol 43, pp 454–461; Stone JL et al, "An objective evaluation of eyedrop instillation in patients with glaucoma". Arch Ophthalmol, 2009, Vol 127,pp 732–736; Mehari T, Giorgis AT, Shibeshi W, "Appropriateness and determinants of proper administration technique of ocular hypotensive agents among glaucoma patients in Menelik II referral hospital, Ethiopia". J Clin Exp Ophthalmol, 2016, Vol 7(3); Hennessy AL, Katz J, Covert D et al, "A video study of drop instillation in both glaucoma and retina patients with visual impairment". Am J Ophthalmol, 2011, Vol 152,pp 982–998; Schwartz GF, Hollander DA, Williams JM, "Evaluation of eye drop administration technique in patients with glaucoma or ocular hypertension". Curr Med Res Opin, 2013, Vol 29, pp 1515–1522: Brown MM, Brown GC, Spaeth GL, "Improper topical self-administration of ocular medication among patients with glaucoma". Can J Ophthalmol, 1984, Vol 19, pp 2–5; Hosoda M et al, "Do glaucoma patients use eye drops correctly?" J Glaucoma, 1995, Vol 4, pp 202–206; Tsai T, Robin AL, Smith JP 3rd,"An evaluation of how glaucoma patients use topical medications: a pilot study". Trans Am Ophthalmol Soc, 2007, Vol 105, pp 29–33.