**Evaluation of Efficacy of *Aloe Vera* (L.) Burm. F. Gel Solution in Methylcellulose-Induced Ocular Hypertension in New Zealand White Rabbits**

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# Abstract

## Objectives

## The present study aimed to evaluate the efficacy of Aloe vera in the methylcellulose-induced ocular hypertension model.

## Methods

Fifty-six rabbits were randomly divided into seven groups. Intraocular pressure (IOP) was raised by anterior chamber injection of 2% methylcellulose in all the groups except the normal control group. Disease control animals were treated with sterile water and active control with topical 0.5% timolol 12 hourly; 6 and 12% A. vera gel topical solutions 8 hourly were given in group IV and V, respectively; 6 and 12% A. vera gel solutions along with timolol were given in group VI and VII animals, respectively. Mean IOP values and percentage of reduction in IOP were compared at 15 min, 30 min, 1 h, 2 h, 4 h, 8 h, 12 h, 24 h, 36 h, and 48 h.

## Results

A. vera gel solutions (6 and 12%) showed a significant reduction in mean IOP from 4 to 2 h time points, respectively, whereas, A. vera gel solutions (6 and 12%) + timolol showed significant less mean IOP from a 30 min time point as compared with disease control. A. vera gel solutions (6 and 12%) showed 8.6 and 10.4% more reduction in IOP, respectively (66.8 ± 4.9% and 68.6 ± 5.4% vs. 58.2 ± 2.3%; p > 0.05), whereas 6 and 12% A. vera gel solutions along with timolol showed 14.5 and 16.2% more reduction in IOP, respectively (72.7 ± 4.7% and 74.4 ± 4.1% vs. 58.2 ± 2.3%; p < 0.05), than disease control group at 48 h.

## Conclusions

Six and twelve percent A. vera gel solutions reduced the IOP effectively. Concurrent treatment with 12% A. vera gel and timolol produced the maximum reduction in IOP.

Keywords: [Aloe Vera (L.) Burm. F](https://www.degruyter.com/search?query=keywordValues%3A%28%22Aloe%20vera%20%28L.%29%20Burm.%20f%22%29%20AND%20journalKey%3A%28%22JBCPP%22%29&documentTypeFacet=article); [Glaucoma](https://www.degruyter.com/search?query=keywordValues%3A%28%22glaucoma%22%29%20AND%20journalKey%3A%28%22JBCPP%22%29&documentTypeFacet=article); [Intraocular Pressure](https://www.degruyter.com/search?query=keywordValues%3A%28%22intraocular%20pressure%22%29%20AND%20journalKey%3A%28%22JBCPP%22%29&documentTypeFacet=article); [Methylcellulose](https://www.degruyter.com/search?query=keywordValues%3A%28%22methylcellulose%22%29%20AND%20journalKey%3A%28%22JBCPP%22%29&documentTypeFacet=article); [Ocular Hypertension](https://www.degruyter.com/search?query=keywordValues%3A%28%22ocular%20hypertension%22%29%20AND%20journalKey%3A%28%22JBCPP%22%29&documentTypeFacet=article); [Rho Kinase](https://www.degruyter.com/search?query=keywordValues%3A%28%22rho%20kinase%22%29%20AND%20journalKey%3A%28%22JBCPP%22%29&documentTypeFacet=article); [Timolol Maleate](https://www.degruyter.com/search?query=keywordValues%3A%28%22timolol%20maleate%22%29%20AND%20journalKey%3A%28%22JBCPP%22%29&documentTypeFacet=article)