Single-Dose 5% Povidone-Iodine Application Shortens Recovery Time in Adenoviral Conjunctivitis: A Prospective Controlled Study

Rawan Alatraqchi, Yasoob Alaameri, Ayub Abbood, Zahraa Abdullah

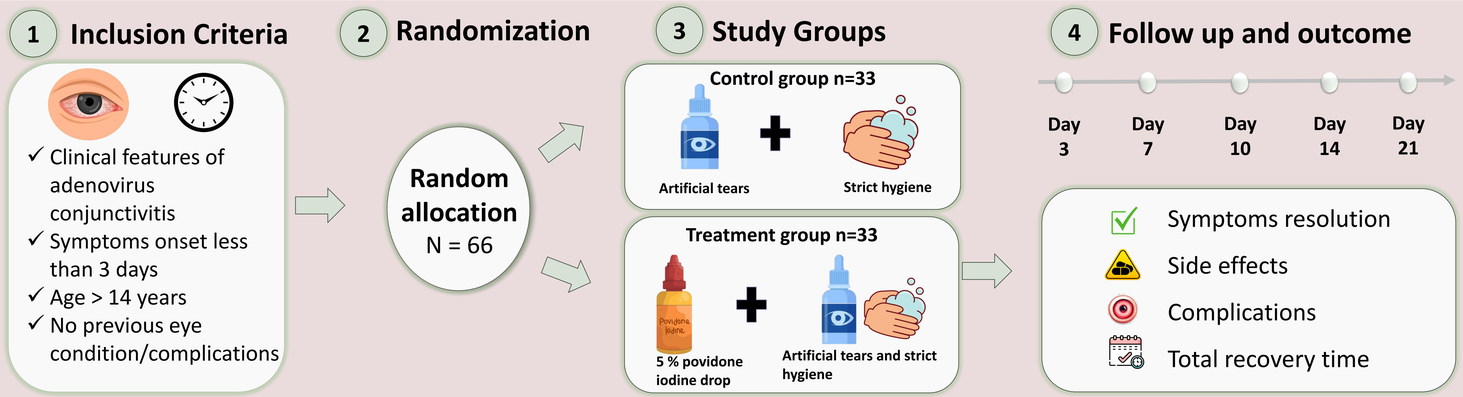
[1] Al-kharkh General Hospital, [2] Baghdad teaching Hospital, [3] Al-kharkh General Hospital, [4] Al-Karama Teaching Hospital

Introduction

Adenoviral conjunctivitis is a common, highly contagious, and self-limiting ocular infection. Despite its high burden on patients and healthcare services, there is currently no widely accepted antiviral treatment. Povidone-iodine has broad antimicrobial activity and may reduce viral load, symptom severity, and duration of illness

Methods

A total of **66 patients** were included (**25 females, 41 males**). Baseline characteristics were broadly similar between groups, with no significant differences in age, sex, or most presenting signs



Results

The povidone-iodine group showed earlier and greater clinical improvement than the control group.

Day 3

- Pain: **31.3% vs 65.6%** in controls (**p=0.0001**)
- Lid swelling: **31.3% vs 65.6%** (**p=0.005**)
- Lymphadenopathy: **9.4% vs 40.6%** (**p=0.003**)

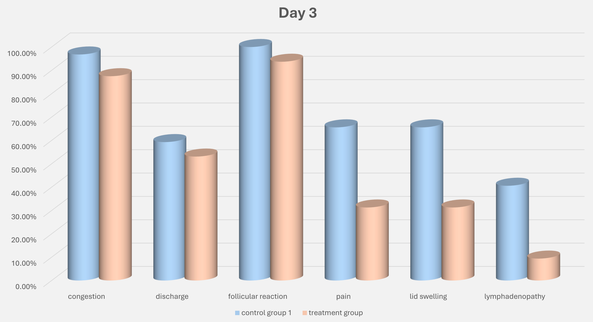
Day 7

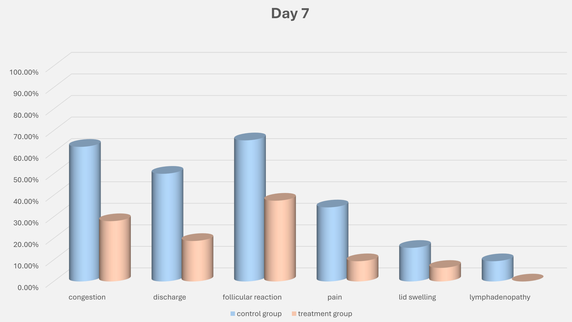
- Congestion: **28% vs 62.5%** (**p=0.0004**)
- Discharge: **18.8% vs 50%** (**p=0.008**)
- Follicular reaction: **37.5% vs 65.5%** (**p=0.005**)
- Pain: **9.4% vs 34.4%** (**p=0.01**)

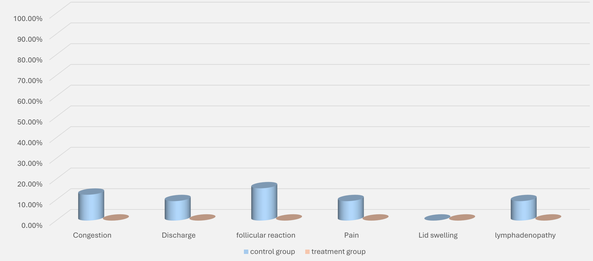
Day 10

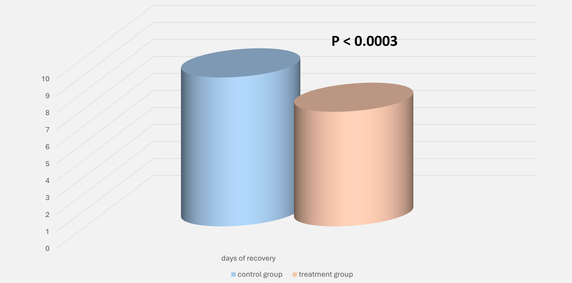
- Congestion: **0% vs 12.5%** (**p=0.03**)
- Follicular reaction: **0% vs 15.6%** (**p=0.02**)

There was also a **significant reduction in total recovery time** in the treatment group (**p<0.0003**).









Discussion

This study suggests that a single 5% povidone-iodine eye drop may be an effective adjunctive treatment in adenoviral conjunctivitis. Patients receiving povidone-iodine showed earlier improvement in symptoms and signs, with significant benefits appearing as early as day 3 and continuing through day 10. The reduction in total recovery time is clinically important, as it may lessen both patient discomfort and the period of infectivity.

Our findings are consistent with previous studies that reported clinical improvement and reduced viral burden with povidone-iodine in adenoviral conjunctivitis. This supports its role as a practical treatment option, particularly as it is inexpensive, widely available, and easy to administer.

No adverse effects were reported in our study, which is in line with published literature supporting the safety and tolerability of povidone-iodine. A shorter disease course may also help reduce transmission in households, clinics, and the wider community

Conclusion

A single 5% povidone-iodine eye drop appears to be a safe, well-tolerated, and effective adjunctive treatment for adenoviral conjunctivitis. It was associated with earlier improvement in symptoms and signs, as well as shorter overall recovery time. This simple and low-cost intervention may help reduce both patient morbidity and community transmission.

Limitation

Clinical diagnosis only, without PCR or AdenoPlus confirmation ,Small sample size , Follow-up limited to 21 days , Only a single-dose regimen was evaluated

References

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