Board # 19

Reducing Adenoviral Patient-Infected Days (RAPID): Tolerability of a Single In-Office Administration of Betadine for Acute Adenoviral Conjunctivitis

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PURPOSE

- "Reducing Adenoviral Patient-Infected Days" (RAPID) is a double-masked randomized planning study of a one-time administration of 5% povidone-iodine (PVP-I 5%; ophthalmic betadine) compared to preservative-free artificial tears (AT) for the treatment of presumed adenoviral conjunctivitis (Ad-Cs).
- We compared tolerability of a single treatment of PVP-I 5% to AT.

METHODS

- Eligibility included: informed consent, age ≥18, red eye with symptoms ≤ 4 days, and positive AdenoPlus rapid immunoassay test.
- Participants were randomized to treatment with 4-5 drops of either PVP-I 5% or AT after 1 drop of proparacaine 0.5%.
- After 2 minutes, the ocular surface was thoroughly lavaged with sterile saline irrigation solution.
- Participants rated overall discomfort in the study eye from 0 (not at all bothersome) to 10 (very bothersome) before and immediately after treatment.
- Unmasked clinicians rated perceived patient discomfort in the treated eye from 0 (no discomfort) to 10 (very high discomfort) after treatment.
- Clinicians rated corneal staining before, immediately after and 1-2 days after treatment using the NEI fluorescein staining scale of 0 to 4 in five corneal zones. Composite scores were calculated by summing all five zones with a maximum score of 20.

RESULTS

Table 1 Corneal Staining Before and After Treatment

* P < 0.01, as compared to pre-treatment grading

	Before Treatment (Day 0 Visit)	Immediately After Treatment (Day 0 Visit)	Follow-Up (Day 1-2 Visit)
AT group	1.8 (SD ± 2.4) n=26	1.6 (SD ± 2.4) n=26	2.2 (SD ± 2.4) n=23
PVP-I 5% group	1.3 (SD ± 1.9) n=30	3.3 (SD ± 3.3)* n=30	1.3 (SD ± 1.9) n=28

In the AT group, no difference in corneal staining was detected between pre-treatment, immediate post-treatment day 0 or follow-up day 1-2.

In the PVP-I 5% group, a significant increase in corneal staining occurred immediately following treatment on day 0 that returned to pre-treatment levels by the first follow-up visit (day 1-2).

Table 2: Patient rated discomfort before and immediately after treatment and clinician estimated post-treatment discomfort.

** P < 0.01, as compared to before-treatment discomfort

	Patient Reported Discomfort		Clinician Estimated Discomfort Immediately After Treatment
	Before Treatment	Immediately After Treatment	
AT group (n=26)	6.7 (SD ± 2.6)	3.3 (SD ± 2.8)**	2.5 (SD ± 2.7)
PVP-I 5% group (n=30)	6.0 (SD ± 3.0)	6.2 (SD ± 2.8)	5.6 (SD ± 2.9)

In the AT group, there was a decrease in participant-reported discomfort immediately after treatment on day 0.

In the PVP-I 5% group, there was no difference in participant-reported discomfort before and immediately after treatment on day 0.

Unmasked clinicians rated the PVP-I 5% group with higher perceived discomfort than the AT group.

CONCLUSION

- Ophthalmic PVP-I 5% has been shown to be safe and tolerable through its use as a surgical scrub and prophylactic use before intra-ocular injections and procedures.
- Anecdotal reports suggest that corneal staining and ocular discomfort are barriers to its use by clinicians in treating Ad-Cs.
- We did not detect an increase in participant-reported ocular discomfort immediately after treatment with ophthalmic PVP-I 5% in this study.
- There was a reduction in participant-reported discomfort immediately after AT treatment.
- There was an increase in corneal staining immediately after treatment with PVP-I 5% which returned to pre-treatment levels by the day 1-2 visit.
- These results suggest that ophthalmic PVP-I 5% is well tolerated by patients with presumed Ad-Cs.

SUPPORT

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- Clinical Trial Registration: # NCT02472223 https://clinicaltrials.gov/ct2/show/NCT02472223