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RESEARCH ARTICLE

EFFICACY OF SODIUM CROMOGLYCATE 4% AS MAINTENANCE THERAPY IN MILD TO MODERATE VERNAL KERATOCONJUNCTIVITIS (VKC) AFTER ACUTE CONTROL

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Abstract

Background: VKC is a chronic, recurrent allergic eye condition common among children and adolescents in warm climates. Characterized by periods of acute exacerbation followed by chronic inflammation. Acute episodes often require steroids, but long-term steroid use poses serious risks like cataract and glaucoma. After controlling the acute phase, a safe and effective maintenance therapy is critical. Sodium Cromoglycate 4% acts as a mast cell stabilizer, preventing recurrence without the side effects of steroids.

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Introduction:-

Objectives:-

- To evaluate the efficacy and safety of Sodium Cromoglycate 4% as maintenance therapy in mild to moderate VKC after acute management.
- To assess symptom control (itching, redness, photophobia, discharge) during remission phase.
- To determine its potential in reducing recurrent flare-ups and minimizing steroid dependency.

Materials and Methods:-

Study Design:-

Prospective observational study.

Study Area:-

Department of Ophthalmology, Maharani Laxmi Bai Medical College and Hospital, Jhansi

Study Population:-

Children aged 5–20 years diagnosed with mild to moderate VKC.

Study Duration:-

6 months (1-month recruitment, 4-month follow-up, 1-month data analysis).

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Randomization and Study Groups:-

- Simple random sampling.

Study Population:-

- Total: 60 patients (30 per group).
- Age range: 5–20 years.
- Male:Female ratio = 2:1.
- Group A: Sodium Cromoglycate 4% (maintenance group).
- Group B: Placebo drops (control group).

Inclusion Criteria:-

- Age 5–20 years.
- Mild to moderate VKC post-acute phase treatment.
- Symptom control achieved after initial management.
- Willingness for regular follow-up

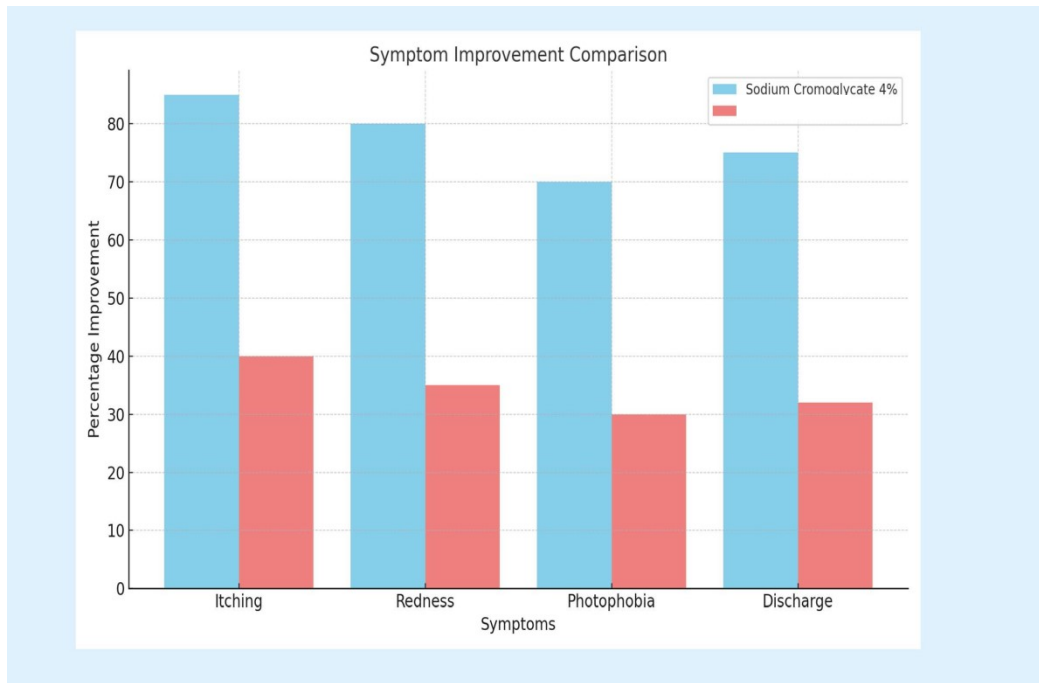
Exclusion Criteria:-

- Acute flare stage or Severe stage of VKC.
- Active ocular infections.
- Recent or concurrent use of topical steroids.
- Diagnosed glaucoma or steroid-induced ocular complications.
- Hypersensitivity to study medications.
- Systemic immunosuppressive therapy.

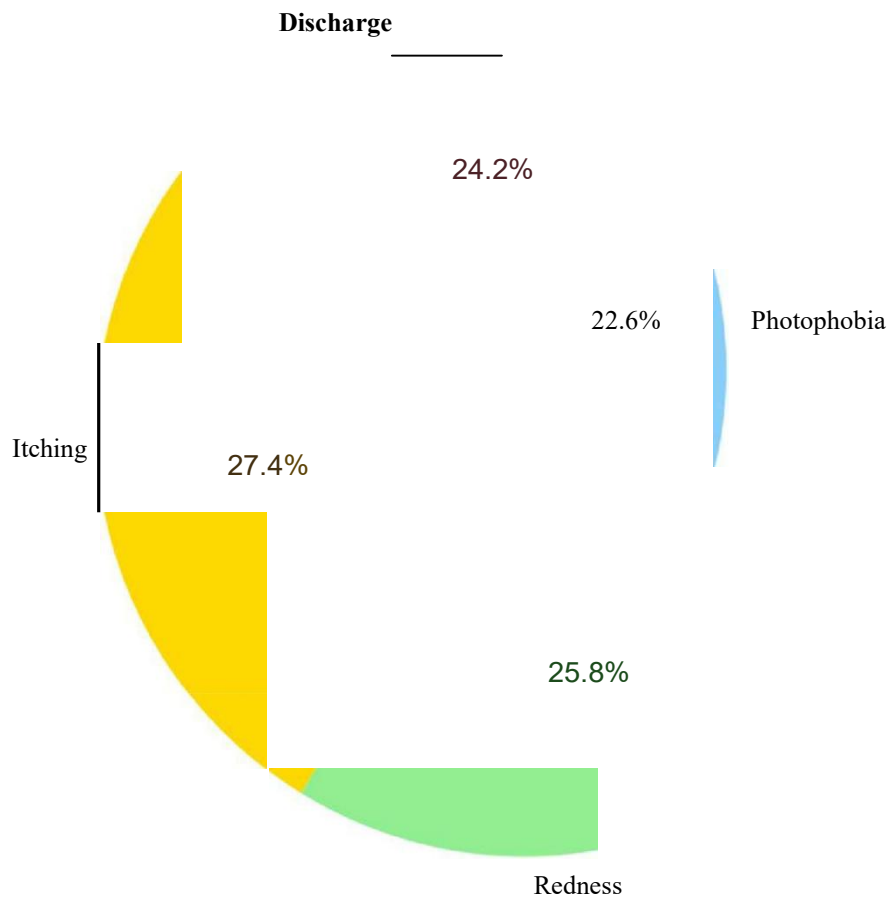
Symptom Improvement (After 4 Weeks):-

| Symptom | GroupAImprovement(%) | GroupBImprovement(%) |
|-------------|----------------------|----------------------|
| Itching | 85% | 40% |
| Redness | 80% | 35% |
| Photophobia | 70% | 30% |
| Discharge | 75% | 32% |

Placebo Drops:-



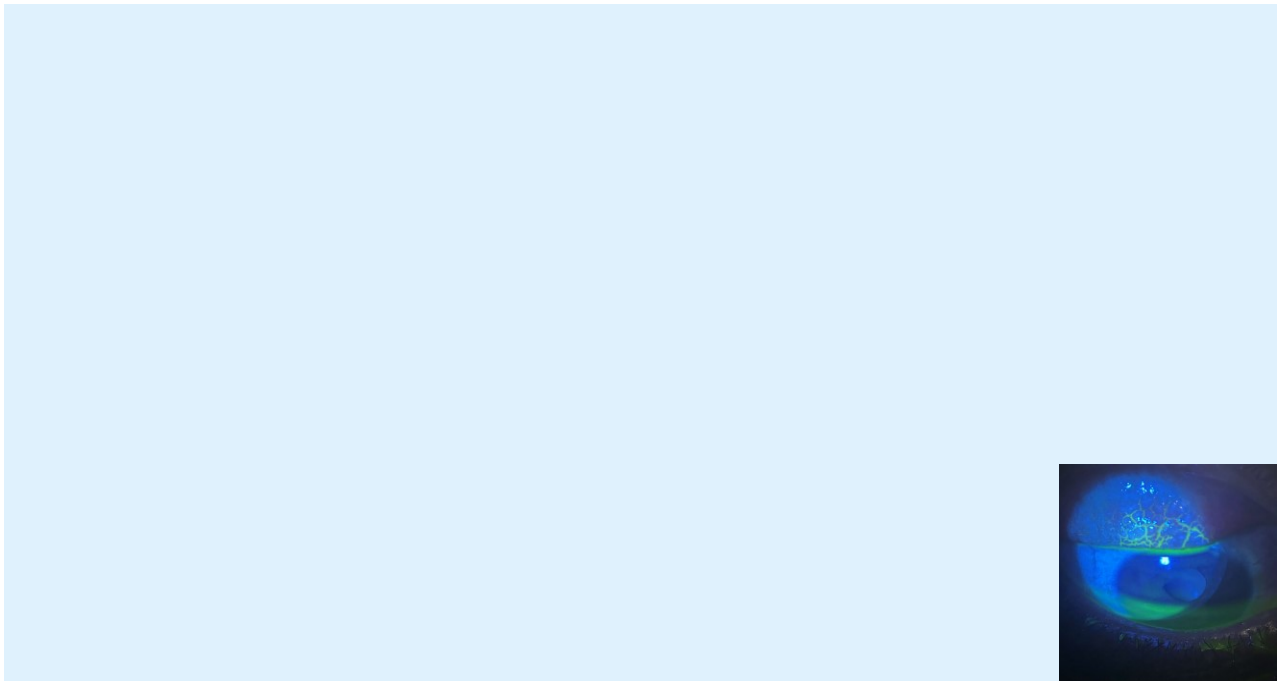
Symptom Relief Distribution - Sodium Cromoglycate 4%:-



Statistical Analysis:-

- Statistically significant maintenance of symptom relief in Group A ($p < 0.05$).
- No major adverse effects noted.
- Better compliance observed in Sodium Cromoglycate group.





Discussion:-

- Sodium Cromoglycate 4% demonstrated effective symptom control and prevented recurrences during maintenance phase of mild to moderate VKC.
- By stabilizing mast cells and preventing allergic mediator release, it ensures prolonged remission.
- Especially important in pediatric patients to avoid long-term steroid complications.
- Early institution after acute phase enhances long-term outcomes.

Conclusion:-

- Sodium Cromoglycate 4% is an effective and safe option for maintaining symptom remission in mild to moderate VKC after acute phase control.
- Reduces flare-up frequency and steroid dependency.
- Recommended for long-term use in VKC management plans.

Limitations:-

- Requires frequent dosing (up to 4 times/day), potentially impacting compliance.
- Limited efficacy in severe or refractory VKC.
- Small sample size and short follow-up period.
- Side effects: Mild transient burning or stinging sensation, No systemic adverse effects reported.

Recommendations:-

- Sodium Cromoglycate 4% should be started immediately after acute symptom control to maintain remission.
- Patient education and counseling critical for compliance and success.
- Future studies should explore combination maintenance strategies and longer follow-up durations.
- Development of improved long-acting formulations could further enhance outcomes.