

ACTH Analogue as Novel Treatment Regimen in Pan-Uveitis and Ocular Cicatricial Pemphigoid

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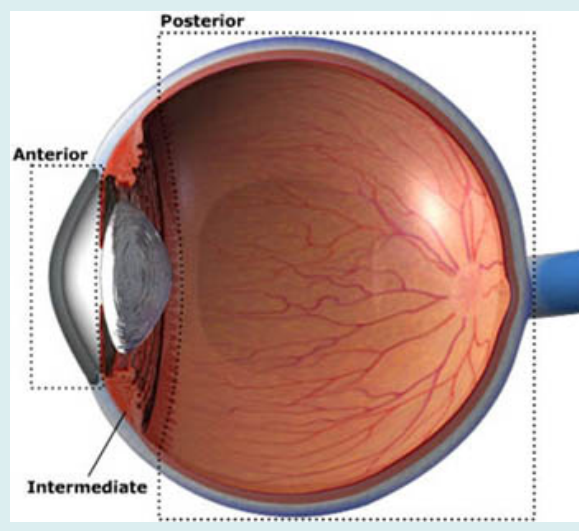
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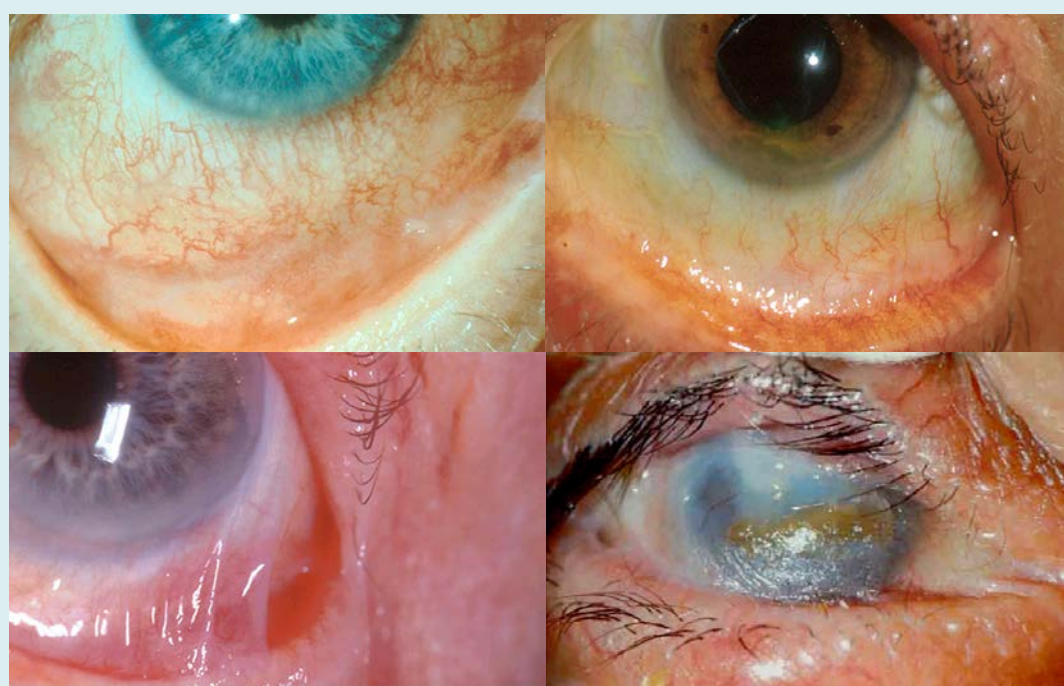
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Background

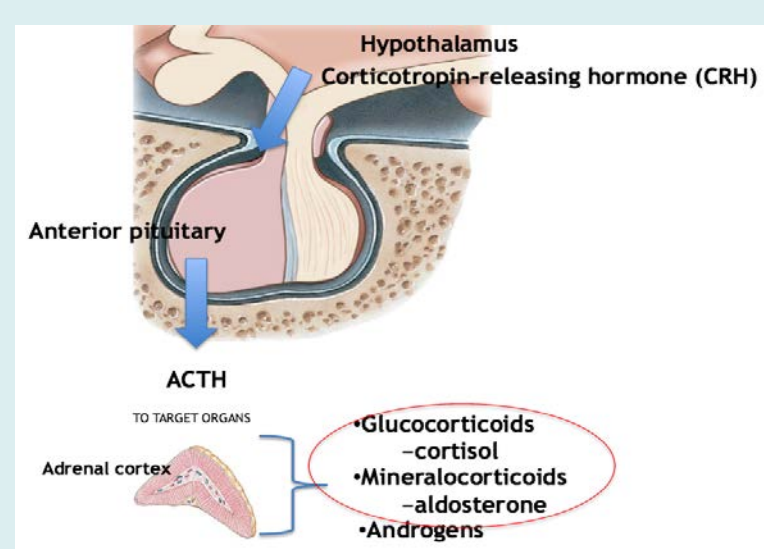
Pan-uveitis is a simultaneous inflammation in the anterior chamber, vitreous humor, and retina or choroid. It is a vision threatening disease, typically chronic and may be associated with systemic inflammatory processes. Treatment mainly consists of corticosteroids and other immunomodulatory therapy (IMT).



Ocular cicatricial pemphigoid (OCP) is a specific entity in a group of diseases, called mucous membrane pemphigoid. It is a potentially blinding, autoimmune blistering disorder, mainly affecting the conjunctiva. Systemic treatment includes corticosteroids and other IMT in order to prevent cicatrization.



Adrenocorticotrophic hormone (ACTH) gel is an ACTH analogue, which provides extended release of ACTH, and stimulates the adrenal gland to secrete endogenous steroids.



H.P. Acthar® Gel (repository corticotropin injection; Mallinckrodt Pharmaceuticals) has additional therapeutic effects on the humoral immune system, beyond its role in adrenal steroidogenesis. It is approved by the FDA for a wide range of acute and chronic, allergic and inflammatory ocular conditions.

The aim of this study is to describe the potential role of subcutaneous ACTH gel in the treatment of non-infectious pan-uveitis and OCP.

Patients & Methods

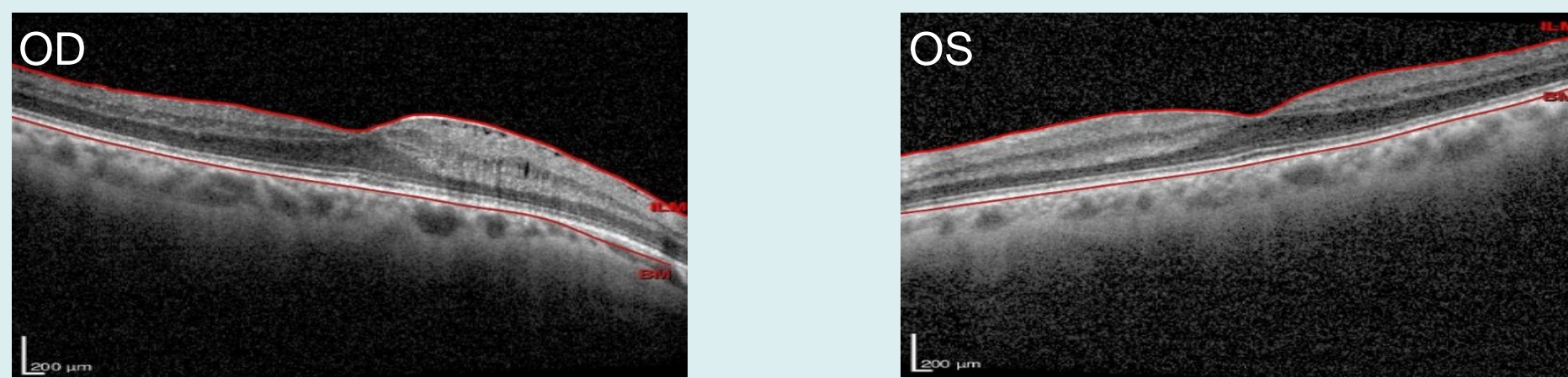
- Retrospective review of 4 patients:
 - 3 patients, age range of 36-64 years, with non-infectious pan-uveitis
 - 1 patient, 75 years-old, with OCP
- All patients had a bilateral (OU) chronic ocular inflammatory disease, difficult to control, with multiple relapses/flares.
- Various therapies, including corticosteroids and numerous IMT had been tried, with no complete remission and side effects development.

Patient	1	2	3	4
Age, Gender	49, male	36, male	64, female	75, female
Disease Background	Pan-uveitis, Glaucoma	Pan-uveitis, Glaucoma	Pan-uveitis	OCP, Glaucoma
Laterality	OU	OU	OU	OU
Treatment	ACTH Gel 80 units BIW	ACTH Gel 80 units BIW	ACTH Gel 80 units BIW	ACTH Gel 80 units BIW
Treatment Duration (mo)	15	14	12	13

Mo, months; ACTH, adrenocorticotrophic hormone; BIW, biweekly; OCP, ocular cicatricial pemphigoid

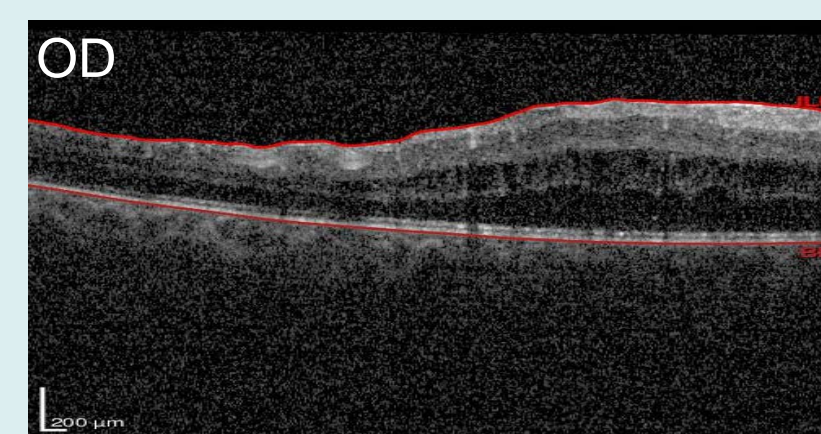
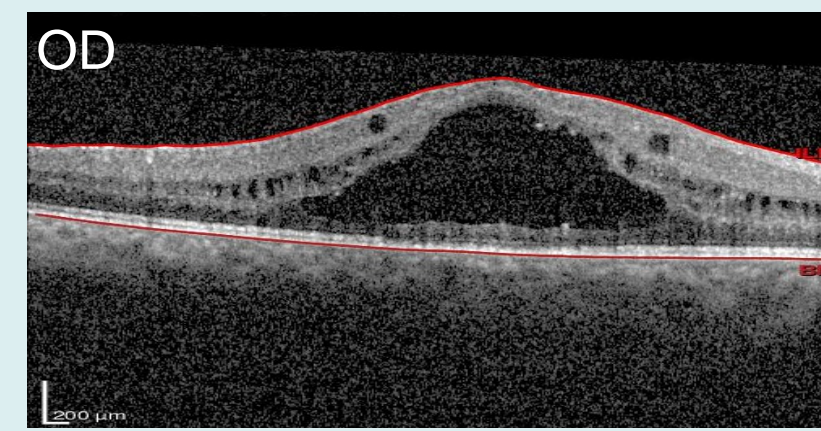
Cases: Case 1

- A 49 year old male
- History of chronic non-infectious pan-uveitis OU with the following complications:
 - Cataract
 - Glaucoma
 - Macular edema
- Previously treated with intraocular and systemic steroids, however, inflammation persisted.
- Therapy with twice weekly ACTH gel (80 units/ml) was initiated, with Prednisone tapered down from 20 mg/day to 5 mg/day at last follow up (F/U).
- At last F/U, after 15 months of treatment:
 - Visual acuity has improved
 - Intraocular pressure was WNL (22/17)
 - No inflammation was observed
 - Macular edema has resolved



Case 2

- A 36 year old male
- History of chronic non-infectious pan-uveitis OU with the following complications:
 - Cataract
 - Glaucoma
 - Macular edema
- Previously treated with systemic steroids and biologic agents, however, inflammation persisted.
- Therapy with twice weekly ACTH gel was initiated, with Prednisone tapered down from 20 mg/day to none at last F/U.
- At last F/U, after 14 months of treatment:
 - Visual acuity has improved
 - Intraocular pressure was WNL (14/19)
 - No inflammation was observed
 - Macular edema was still present, but with gradual improvement



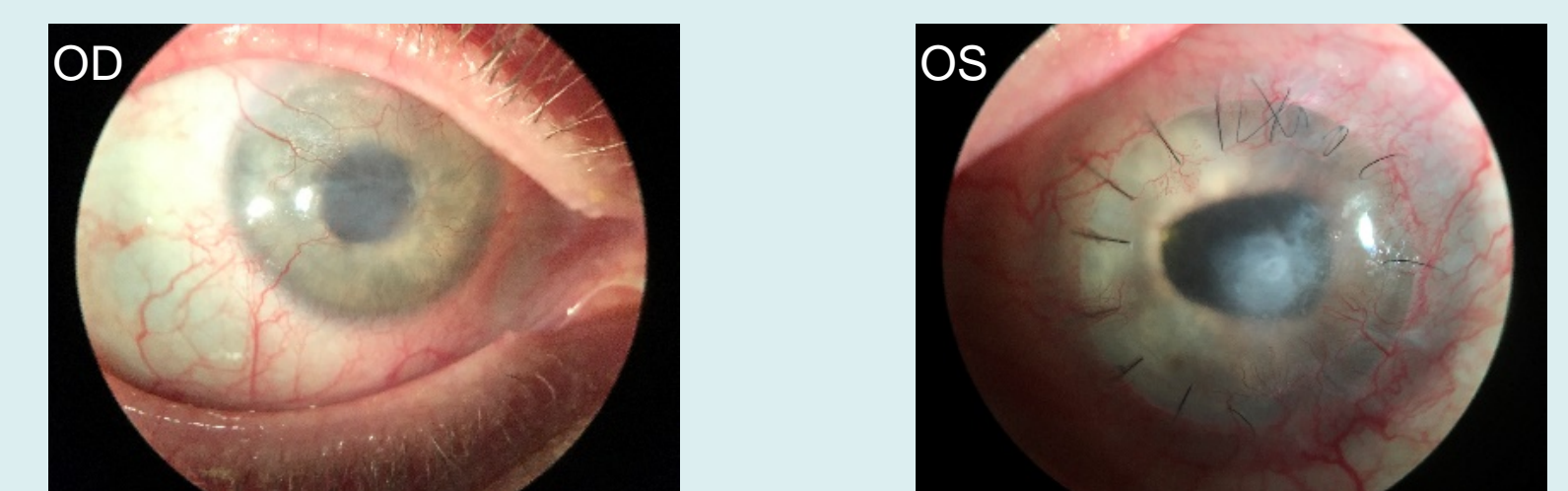
Case 3

- A 64 year old female, HLA-B27+
- History of chronic non-infectious pan-uveitis OU with the following complications:
 - Cataract
 - Macular pucker and ERM
 - Vitreous hemorrhage
- Previously treated with intraocular injections and systemic steroids and various IMT, with side effects development and multiple flares.
- Therapy with twice weekly ACTH gel was initiated, with Prednisone tapered down from 10 mg/day to 3 mg/day at last F/U.

- At last F/U, after 12 months of treatment:
 - Visual acuity has improved
 - Intraocular pressure was WNL (18/20)
 - No inflammation was observed

Case 4

- A 75 year old female
- History of ocular cicatricial pemphigoid OU with the following complications:
 - Cataract
 - Glaucoma
 - Corneal epithelization, s/p OS PKP
- Previously treated with local treatment, systemic steroids and IMT, however, with side effects development and progressive cicatrization.
- Therapy with twice weekly ACTH gel was initiated, with Prednisone tapered down from 10 mg/day to none at last F/U.
- The patient stopped ACTH gel treatment for 3 months (due to loss of coverage) and then immediately flared up upon treatment cessation.



- At last F/U, after 13 months of treatment:
 - Visual acuity has improved
 - Intraocular pressure was WNL (14/12)
 - No inflammation was observed
 - Disease progression was halted

Therapy and Outcome

- During mean treatment period of 13 months, all patients demonstrated:
 - Significant improvement in ocular inflammation
 - Visual acuity was stable
 - No significant adverse effects
- Systemic steroids dosage was successfully reduced from a mean of 15 mg/day at start to 2 mg/day on average at last follow up.

Conclusions

- According to our experience of treatment with ACTH gel for > 1 year, it may be an effective alternative therapy in the management of pan-uveitis and OCP.
- Specifically, ACTH gel can play a role in:
 - Chronic and steroid-dependent cases
 - Conditions that do not respond to IMT
 - Patients who are not able to tolerate IMT due to side effects
- ACTH gel appears to be a safe, long-term alternative for patients with chronic inflammatory diseases.