

AN EVALUATION OF TREATMENT OF RAGWEED-SENSITIVE PATIENTS WITH ADRENOCORTICOTROPIC HORMONE IN GELATIN*

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PREVIOUS studies have shown the value of adrenocorticotrophic hormone and cortisone in the treatment of ragweed-sensitive patients.^{1, 2} The purpose of this article was to study the effects of a single dose of a slowly adsorbed preparation of adrenocorticotrophic hormone in fluid gelatin.

The effect of this hormone agent in the treatment of 20 ambulatory patients with ragweed hay fever and pollen asthma living in New York City or environs forms the basis of this report. The group comprised 9 male and 11 female patients; age at time of treatment varied from 12 to 55 years, with 13 of this group less than 40 years of age. The majority of the patients gave a positive family history of allergic manifestations. Members of the group gave histories of hay fever during the ragweed season for periods of from 1 to 47 years, and the diagnosis was confirmed by positive intradermal tests with ragweed extracts. Eight patients of the group also gave a history of seasonal (ragweed pollen) asthma. With respect to previous treatment, 4 patients had never received any pollen extract therapy, and 4 others had not received any injections for at least two years. The 12 remaining patients had received preseasonal or perennial therapy.

Indications for the use of corticotropin in gelatin in pollen-sensitive patients may be listed as follows: (1) those who present themselves too late for adequate preseasonal therapy, (2) those who are exquisitely sensitive to and do not tolerate adequate doses of ragweed extract, and (3) those who receive the usual injection treatment in adequate dosage but do not show satisfactory clinical improvement.

Plan of Therapy.—It was arbitrarily decided to give a single intramuscular injection of 40 mg. (or 40 Armour units) of H.P. Acthar Gel daily to each patient. The number of injections given to each patient varied from two to nineteen. It depended upon their degree of promptness of clinical improvement, the lack of cooperation of the patient, and undesirable severe side effects which occurred in 3 patients. As a control, injections of buffered saline solution were substituted for corticotropin gel for varying periods of time in 4 patients (Figs. 1 and 2).

Evaluation of Therapy.—The patients were divided into two groups. Group A comprised 12 patients with coryzal symptoms only; Group B, 8 patients with both coryza and asthma. A careful record of signs and symp-

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*Highly purified adrenocorticotrophic hormone in fluid gelatin (H. P. Acthar Gel) was supplied by The Armour Laboratories, Chicago, Ill.

toms was kept for each patient during the period of observation. With two exceptions, this extended from the beginning of corticotropin injections until the end of the pollen season. The course of symptoms and clinical signs presented by each patient was arbitrarily graded from zero to 4 plus, as plotted on the accompanying Figs. 1 and 2.

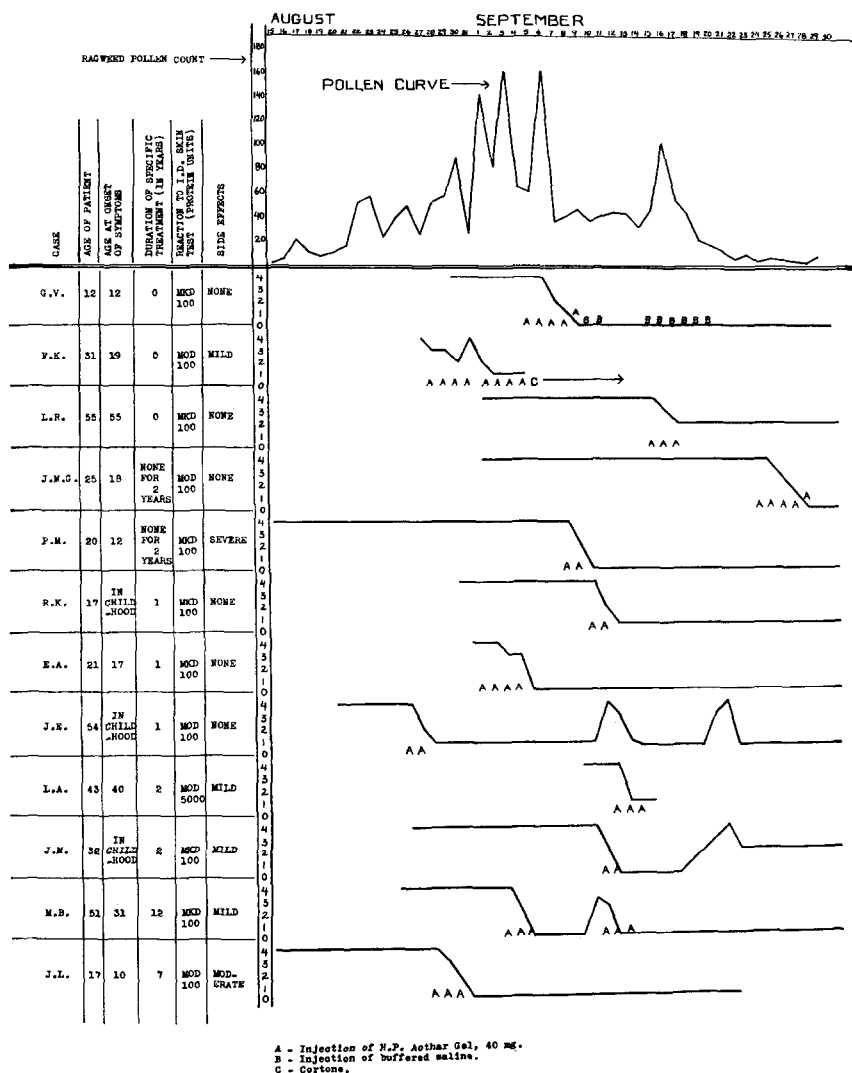


Fig. 1.—Individual curves of symptoms and signs of hay fever cases graded from 0 to 4 plus.

- Group A:
- 0 Complete freedom of subjective complaints.
 - + Stuffiness of nose; occasional sneezing and nasal mucoid discharge.
 - ++ Mild itching sensation of nose, throat, and eyes; mild sneezing and nasal mucoid discharge.
 - +++ Same as ++ from mild to moderate degree; edema of nasal mucosa; hyperemia of throat.
 - ++++ Same as +++ from moderate to a marked degree.

- Group B: Plotted for asthma as follows:
- 0 Complete freedom of asthmatic symptoms.
 - + Occasional mild wheezing.
 - ++ Mild wheezing on exertion mostly; mild respiratory sibilants.
 - +++ Mild to moderate persistent wheezing and dyspnea; presence of asthmatic chest signs.
 - ++++ Moderate to marked persistent wheezing and dyspnea; presence of asthmatic chest signs; physical activities limited.

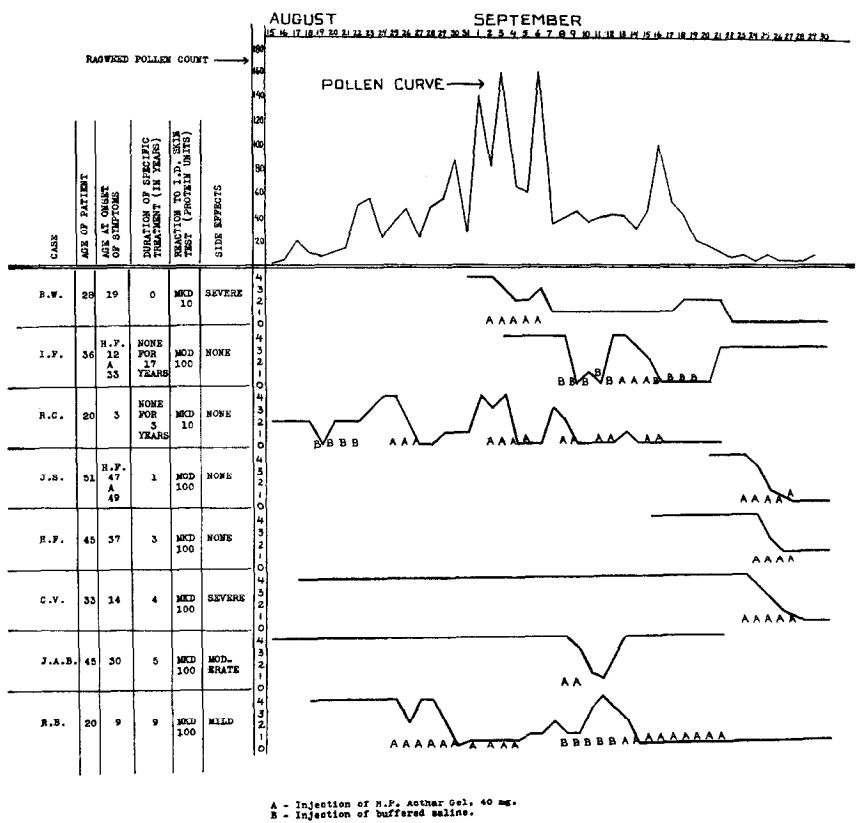


Fig. 2.—Individual curves of symptoms and signs of hay fever and pollen asthma cases graded from 0 to 4 plus.

Because of the small size of the group of patients studied no definitive conclusions can be reached though some interesting observations may be noted. The immediate response to corticotropin therapy appeared to be independent of age, sex, duration of disease, previous specific therapy, degree of hypersensitivity, or pollen count. There was a marked improvement in all patients within forty-eight hours after treatment was started. The majority of patients were asymptomatic after 4 or 5 successive daily injections. Most of the patients who had previously been treated with corticotropin were asymptomatic during the last peak (September 15 and 16) in the pollen count without any additional therapy.

Six patients of the rhinitis group (Group A) remained practically free of symptoms for the rest of the ragweed season after cessation of therapy. One had probably insufficient therapy and was never asymptomatic. Two had to be discarded because of insufficient follow-up and institution of cortisone therapy. The remaining 3 had recurrences of hay fever symptoms, but one responded very well to a second course of therapy (Fig. 1). The cases with hay fever and asthma appeared slightly more resistant to the action of hormone therapy and showed a greater incidence of recurrences (Fig. 2).

Side effects were noted in 10 patients, but in only 3 cases did therapy have to be discontinued (Case 5, Fig. 1, and Cases 1 and 6, Fig. 2). All side effects were temporary and disappeared promptly after cessation of therapy. Because of their subjective character, side effects were difficult to evaluate except in one patient who developed edema of both upper and lower extremities. They may be listed by order of frequency as shown in Table I. No patient

TABLE I

SIDE EFFECTS	NUMBER OF PATIENTS
Flushing of face	3
Slight headache	2
General weakness	2
Insomnia	2
Nausea	2
Dizziness	1
Lightheaded	1
Abdominal pain	1
Soreness in bones	1
Acne of face	1
Edema of extremities	1
Dryness of throat	1
Cardiac palpitation	1

complained of pain at the site of injection nor was any objective local reaction noted.

CONCLUSIONS

The clinical response of ambulatory patients with ragweed hay fever and asthma to corticotropin in gelatin has been studied.

In the group of 20 patients studied, it appeared to be an effective form of symptomatic therapy under the conditions designated.

In cases where side effects occurred they were temporary and disappeared promptly when therapy was discontinued.

The indications for the use of corticotropin gel are discussed and may be summarized: (1) patients who present themselves too late for specific therapy, (2) patients who do not tolerate pollen therapy, and (3) patients who do not respond satisfactorily to the usual treatment with pollen extract.

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