

THE CLINICAL EFFECT OF LOMUDAL IN CHILDREN WITH POLLEN ALLERGIES

Inga Engström: Our experience in the paediatric department of Karolinska Sjukhuset with disodium cromoglycate in the treatment of asthmatic children dates back to 1968. Initially the steroid-sparing effect was studied (1) as well as the inhibitory effect in bronchial challenges (3). These studies led to further clinical investigation with the drug and we have been particularly interested in the effect in the treatment of children with pollen allergy.

From 1970–1973, 73 children with pollen asthma were treated with Lomudal during the pollen season in May and June. Thirty-six children were treated for only one season, 16 for two seasons, 14 for three seasons and seven for all four seasons. The patient material is summarized in Table 1. The number of children treated increased each year, from 29 in the first to 41 in the last. Of the children who were treated in the first year, two-thirds had been treated by hyposensitization for 1 or more years previously. The relative failure of hyposensitization in these children led to the trial of Lomudal. The percentage of children concurrently treated with Lomudal and hyposensitization has decreased during the 4 years, reflecting a gradual change in treatment at the clinic.

The results of treatment were evaluated on the basis of diary cards and clinical assessment. The diary card was completed by the patient, who graded his symptoms on a scale from 0 to 7. The clinical assessment was made after examination of records and interviews with the child and his parents after the pollen season and the child's condition during the season was graded on a scale from 0 to 3. The results of the clinical assessment (Fig. 1) show that in the majority of cases

TABLE 1
Summary of Case Material Studied in 1970-1973.

	1970	1971	1972	1973	Total
Number	29	34	34	41	138
Age	6-21	5-22	6-19	5-20	5-22
Tree pollen	26	31	31	34	122
Grass pollen	29	32	31	36	128
No hyposensitization	5	10	13	20	43
Hyposensitization	20	13	9	10	52
Previous hyposensitization	4	11	12	11	38

symptoms were slight or absent during Lomudal treatment, whereas without treatment symptoms were moderate to severe. When the results for the 4 years were combined, giving 138 patient-seasons, 95 per cent were classified as moderate-severe before treatment. During treatment, 86 per cent were classified as slight-no symptoms (Fig. 2).

There is an obvious element of subjectivity in these assessments by patient and clinician and perhaps the results should be regarded with caution. The diary cards alone should be a more objective indication. A tabulation has been made of the mean weekly diary card scores over a 12-week period (Fig. 3). The maximum possible weekly score was 49. Fifty-four per cent of the children had scores of 0, 32 per cent had scores of 1-7 and only 14 per cent had scores of over 7. These results are comparable to those with prolonged specific hyposensitization and have induced us to modify the methods of treatment in our clinic. Where Lomudal has been effective over one or two seasons, we do not always find hyposensitization necessary. It remains to be seen whether, over a long period, Lomudal will prove as effective as hyposensitization.

Lomudal has also been effective in pollen rhinitis. This is of course quite predictable from the clear allergic aetiology of the condition and the mode of action of the drug. Our investigations cover a 3-year period. In 1970 we carried out a

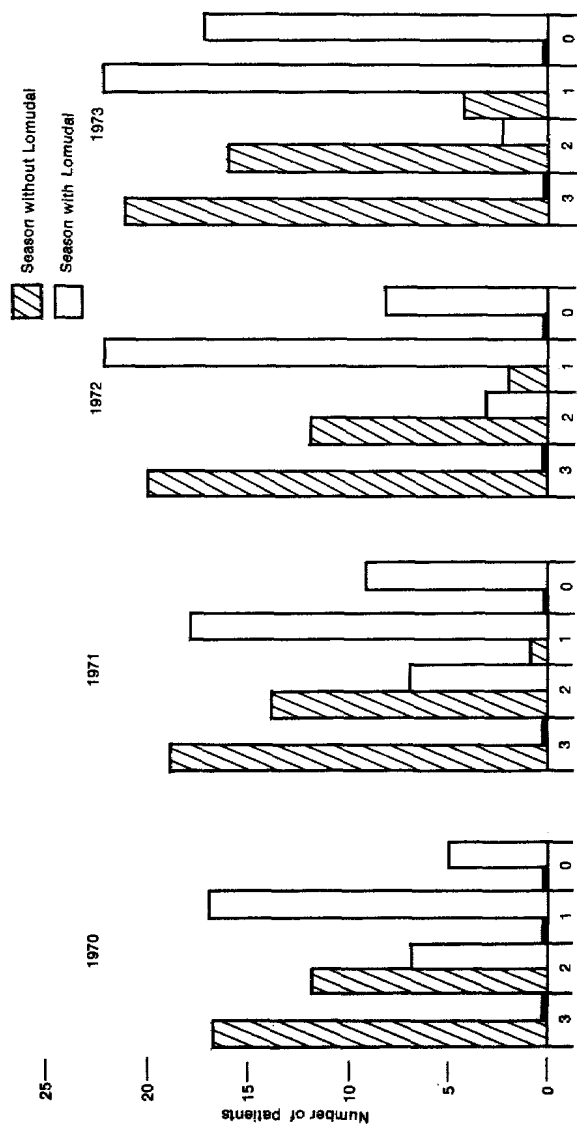


Fig. 1.
Clinical assessment of Lomudal treatment, 1970-1973.

- 0 = no symptoms
- 1 = slight symptoms
- 2 = moderate symptoms
- 3 = severe symptoms

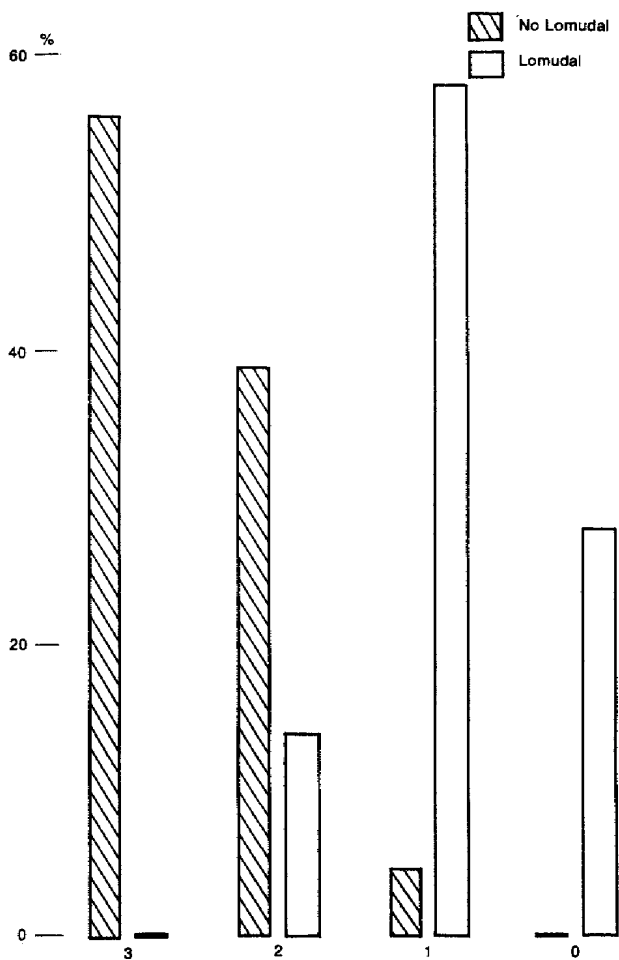


Fig. 2.

Effect of Lomudal in 138 patient-seasons.

0 = no symptoms

1 = slight symptoms

2 = moderate symptoms

3 = severe symptoms

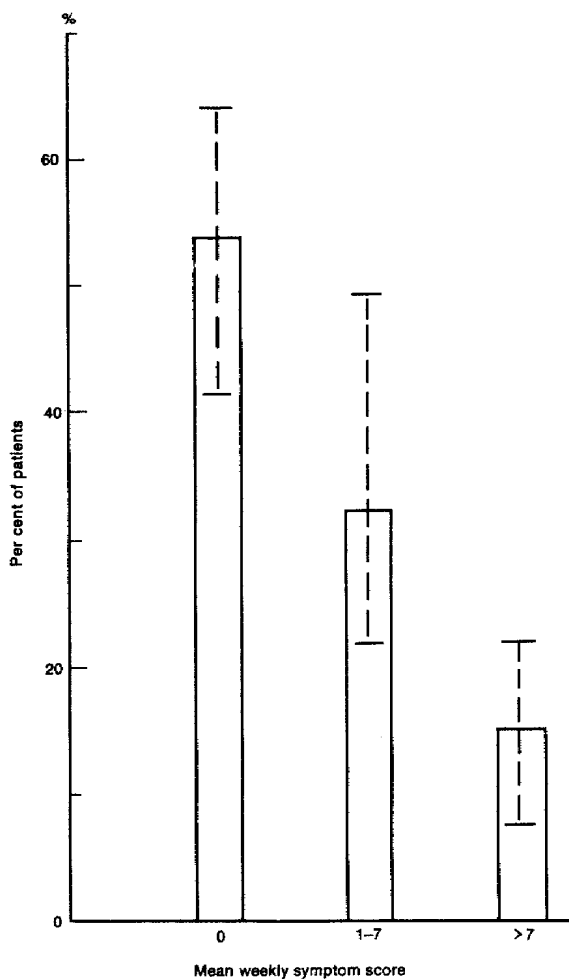


Fig. 3.

Mean weekly symptom scores during Lomudal treatment, May-July 1973.

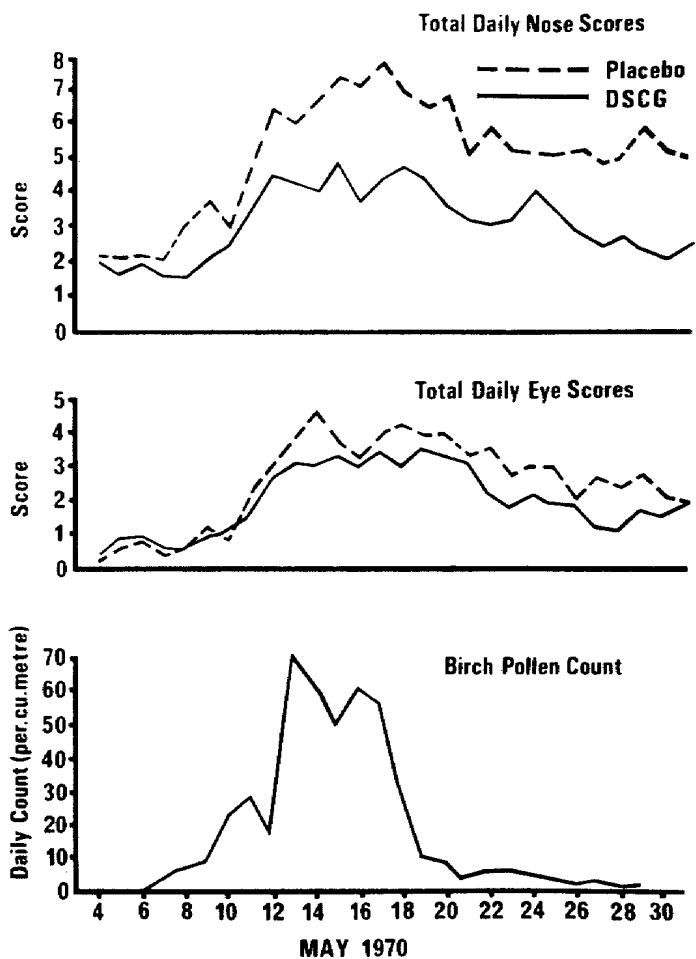


Fig. 4.

Nose and eye symptoms in Lomudal and placebo groups during birch pollen season (1970).

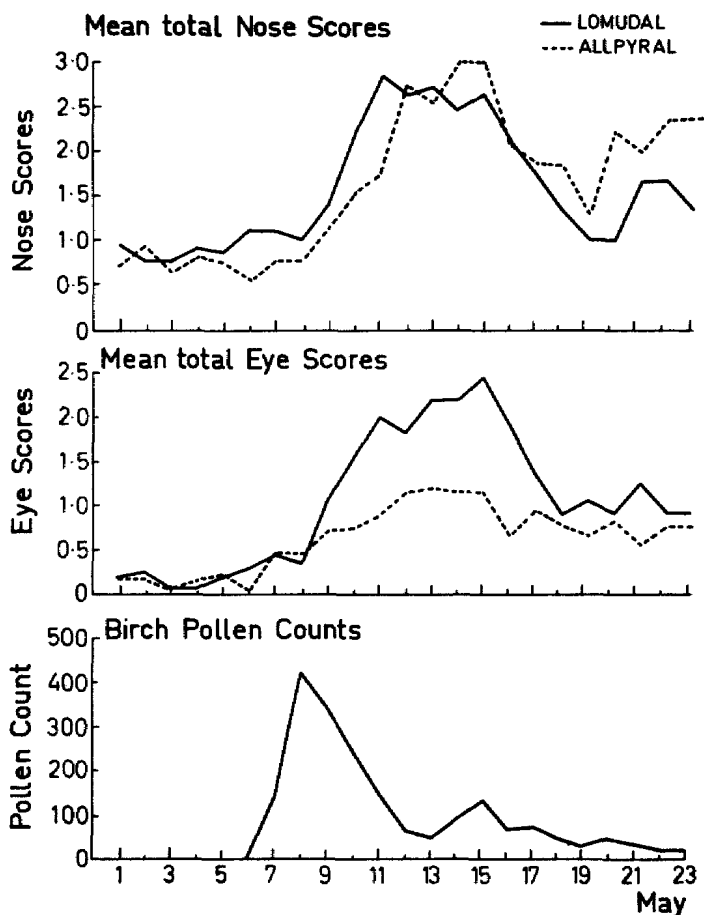


Fig. 5.

Nose and eye symptoms in Lomudal and hyposensitization groups during birch pollen season (1971).

controlled study during the birch pollen season with a group of 38 children from Sachs' Children's Hospital and Karolinska Sjukhuset (4). Starting before the pollen season began, half

of the group insufflated Lomudal powder and half insufflated placebo for a 6-week period. The results were assessed primarily on symptom scores. During the peak pollen period, the children in the Lomudal group had a significantly lower incidence of nasal symptoms. There was no difference in the incidence of eye symptoms (Fig. 4). These results would be expected from the mode of action of the drug, which exerts a local action in the target organ to which it is applied.

In 1971 we compared the effectiveness in rhinitis of Lomudal and specific hyposensitization with broad-leaf allergens (birch, alder, hazel) (2). Both treatments had similar effects on nasal symptoms. Hyposensitization seemed to have a greater effect on eye symptoms, but the difference was not statistically significant (Fig. 5). In 1972, a comparison was made between Lomudal insufflated as a powder, Lomudal solution, hyposensitization and an untreated control group (2). There was no significant difference between the three treated groups. Lomudal solution was significantly better than the control group with respect to nasal symptoms. The number of cases was small, however, and there was wide variation. The results should therefore be interpreted with caution.

Our overall experience suggests that Lomudal and specific hyposensitization give comparable results on nasal symptoms, but that Lomudal applied to the nose has little effect on eye symptoms. Lomudal can, therefore, be considered an alternative to hyposensitization and antihistamines in the treatment of hay fever. In general we find that it does not give complete freedom from symptoms of pollen rhinitis. In contrast, the same drug can give complete freedom from symptoms in 50 per cent of patients with pollen asthma. The corresponding figure in pollen rhinitis is just over 30 per cent.

REFERENCES

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Discussion

B. Kjellman: You have used both Lomudal powder and solution in the nose. Which was the more effective?

I. Engström: We found no significant difference between the groups. The numbers were small, however, and it may be that with larger numbers a difference would be seen.

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