

## COMPLICATIONS IN LOMUDAL TREATMENT

*N. Svanborg:* Lomudal is a valuable drug with no definite side-effects. Complications of treatment have been reported in the literature and I have experienced some myself. A corticosteroid-withdrawal syndrome with pseudorheumatism has been reported during Lomudal treatment (1). As an example, a 20-year-old girl in my material who had been treated with steroids for 13 years was started on Lomudal and over a period of 18 months it was possible to withdraw steroids completely. She showed clear signs of adrenal insufficiency with tiredness, abdominal pains and joint symptoms of pseudorheumatism. Two years after withdrawal of steroids, she has a normal adrenal function. She was found to be allergic to house dust and has been desensitized. She now manages very well on Lomudal treatment.

These symptoms of stiffness and aching limbs are not unusual in patients who have been on high doses of steroids. The treatment of the syndrome is difficult. Indomethacin and similar drugs give variable results and restoration of steroids does not always help.

We discussed earlier the tendency towards an increased reagin level during initial Lomudal treatment. It has been suggested that, for safety, one should withdraw Lomudal the day before the desensitization injection is given in order to minimize the risk of masking an allergic reaction. I have not withdrawn Lomudal and have noticed only a few cases of mild skin reactions and one case of moderate Quincke's oedema. These are side-effects that also occur during desensitization without Lomudal protection. We should, however, consider that the patient with an infection can have an increased sensitivity, even though the asthmatic symptoms do not occur, thanks to Lomudal treatment.



*Fig. 1.*

Eosinophilic lung infiltrates have been reported during Lomudal treatment (2). One of our patients who was allergic to animal dander was treated with Lomudal and, after 2½ weeks in which he was free from symptoms, he became ill with fever, malaise and weight loss. On examination, blood and sputum eosinophilia was present and lung infiltrates were seen (Fig. 1). The only drug he had taken during this period was Lomudal, but he had been exposed to an allergen—a cow-hair carpet. He was admitted to hospital, Lomudal was withdrawn and he improved slowly over a period of 2–3 months and eventually recovered fully. Later Lomudal treatment was recommenced, without any side-effects over a 2-year period. A second patient has shown the same clinical picture and was treated similarly. I think it is probable that the cases which have been reported as hypersensitivity to Lomudal are in fact reactions caused by exposure to an allergen with the alerting asthmatic reaction

being prevented by the drug. With our patient, we were able to show that he had a late allergic reaction to extracts of his cow-hair carpet.

I think it is fair to say that the only certain complication of Lomudal treatment is dryness of the throat after inhalation.

## REFERENCES

1. Hargreave, F. E., McCarthy, D. S. & Pepys, J. (1969): Steroid "pseudo-rheumatism" in asthma (letter). *Brit. med. J.* *1*, 443.
2. Löbel, H., Machtey, I. & Eldror, M. Y. (1972): Pulmonary infiltrates with eosinophilia in an asthmatic patient treated with disodium cromoglycate (letter). *Lancet* *II*, 1032.

## Discussion

*H. Formgren*: Are you sure that the infiltrates were of eosinophils? These are, typically, transient and I think you said they were present in your patient for 2 months. Did you perform a biopsy?

*N. Svanborg*: The blood and sputum eosinophilia were very marked and there was a changing X-ray picture of lung infiltrates which changed in intensity and location. There was no sign of infection.

*S. Godfrey*: Did you consider *Aspergillus* infection? The X-ray picture would be consistent with allergic bronchopulmonary aspergillosis. It is almost certain that the published report of pulmonary infiltrates associated with Lomudal was in fact a case of early aspergillosis.

*N. Svanborg*: We found no evidence of *Aspergillus* and no precipitins. They are rare in Sweden.

*J. Pepys*: The X-ray picture looked to me to be typical of allergic aspergillosis. There was a characteristic dilated bronchus in the right upper lobe. I understand that the Swedish extracts of *Aspergillus* are not very satisfactory. Dr Zetterström has told me of a patient who did not react to commercial Swedish extracts, but who reacted very well to material he made himself and to extracts from London.

I am glad that the pseudorheumatism syndrome has been mentioned. I think it is essential to warn patients that they are likely to feel unwell when they reduce their dose of steroids. If they are aware of the cause of joint pain and other symptoms, they will not assume it is another disease. Incidentally, I am surprised that so few cases reported here could be taken off steroids altogether. We have many patients who have been able to stop steroids after being on 10–20 mg/day, often for long periods.

With regard to the combined use of Lomudal and hyposensitization, I think the work of Taylor in Manchester is of interest (4). He has used local hyposensitization under Lomudal protection by introducing increasing doses of pollen extract into the nose and masking local symptoms by prior administration of Lomudal. He claims very good results in pollen rhinitis.

*B. Arner:* The problem of steroid withdrawal symptoms is complex. As an endocrinologist, I think the physiological treatment of adrenal insufficiency of this type is oral cortisone acetate, 25 mg. I have never seen any complications from this dose level.

*F. Lange-Nielsen:* It was mentioned that beclomethasone could be used for these patients, but this will do nothing for adrenal suppression. I think it is necessary to reduce steroid doses very slowly and to monitor adrenal function by the synacthen test.

*J. Pepys:* Beclomethasone aerosol is very effective in allowing us to wean many patients from systemic steroids and we now have many patients who have been treated in this way. It is surprising that plasma cortisol levels frequently rise quite rapidly, even if systemic steroids have been used for years. It seems that adrenal insufficiency may be a physiological suppression rather than an anatomical atrophy. It is very interesting that we have patients whose cortisol levels have not gone up at all and who have not had any withdrawal symptoms. Conversely, we have patients whose cortisol levels have increased satisfactorily and who complain of a variety of symptoms. It is obvious that there is much that we do not know of

the underlying mechanisms. Often all that is necessary is to persuade the patients to persevere, but if they are very unhappy we put them back on prednisolone. We have not tried the suggestion of cortisone acetate.

*B. Uvnäs:* Are there any other problems in connection with Lomudal treatment?

*B. Arner:* A major difficulty is to get the patients to use the Spinhaler correctly, although it is probably even more difficult to teach them to use freon aerosols. Children can be instructed to use the Spinhaler so that it makes a sound like an angry bumble-bee. It is very important to spend time in instruction. There is evidence that patients with impaired inspiratory capacity because of hypersecretion of mucus benefit less from Lomudal. This is yet another variable which must be considered in long-term trials.

*J. Høyen:* The Spinhaler can be used with children of age 4 or perhaps 3. Phelan from Australia has reported encouraging results with very young children using a nebulized solution of sodium cromoglycate (3). With young children instruction in the use of Lomudal is of the utmost importance. I think that what is described as treatment failure is often failure to make best use of the drug.

#### REFERENCES

1. Phelan, P. D. (1973): Disodium cromoglycate in young children with asthma. 8th Int. Congr. Allerg., Tokyo. Special Sectional Meeting.
2. Taylor, G. & Shivalkar, P. R. (1972): Local nasal desensitisation in allergic rhinitis. Clin. Allergy 2, 125.

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