

## THE NASAL DROP ADDICT\*

J. F. JARVIS, *Department of Otolaryngology, Grootte Schuur Hospital and University of Cape Town*

Every rhinologist from time to time sees patients who are using decongestant drops every few hours in an effort to obtain a clear nasal airway. The duration of relief obtained becomes shorter as the chemical rhinitis itself causes further nasal congestion, leading to an even more frequent use of the drops in a desperate attempt to obtain a clear nose.

Most of these patients were originally suffering from vasomotor rhinitis, and had been incorrectly advised to

use various brands of nasal medicaments for symptomatic relief. Their final plight is a miserable one and the large number of bottles they are forced to buy causes them not inconsiderable expense.

The object of this communication is to describe a simple regimen that I have been using for a number of years to 'wean' such patients from the vicious cycle in which they had become enslaved. It has never been found to fail.

\*Date received: 2 August 1968.

## METHOD

The first requirement is a careful clinical assessment of the patient's condition to confirm that he is in fact suffering from vasomotor rhinitis with an added chemical rhinitis, and to exclude other pathology in the nose. It is important to examine the patient when he has not used his drops for some hours, and a second visit may be needed to secure this. The precise nature of his problem is then explained to him, and he is told he must give up the use of drops entirely, but that special treatment will be given to him to help him over the discomforts of the withdrawal period. His cooperation must be assured before more can be done.

*Medication*

In my opinion steroids are generally contraindicated in the treatment of vasomotor rhinitis. They often give dramatic relief, but these potent drugs must be continued if benefit is to be maintained, with the risk of undesirable side-effects. Notwithstanding, drop addiction is an exception to this rule, as also is the use in the nose, by injection into the inferior concha, of a slowly absorbed preparation. To assist in weaning the patient from his drops, a short but intensive course of Medrol tablets (methylprednisolone, 4 mg.) is given. Six tablets are to be taken the first day, 5 the next, and so on, until only one is given on the 6th day—a total of 21 tablets. At the same time an oral antihistamine is given in full doses. Chlortrimeton, 4 mg. twice or three times a day, is my choice. The patient is warned that he may become sleepy on this dosage but that this usually wears off as the course proceeds. If the hypnotic effect is too severe, the morning dose may be combined with dexedrine, 2½ mg., which antagonizes the hypnotic effect, but is synergistic to the nasal decongestant action. The patient is seen again on the 7th day of the treatment and he will usually have been able to dispense with his drops. The appearance of the nasal mucosa will show a marked change in most cases.

*Vasomotor Rhinitis*

The problem now remains to treat the vasomotor rhinitis and prevent the need to resort again to drops. When the patient has been able to do without his drops for some weeks, permission may be granted to use the drops only on special occasions, such as before an important engagement, but never more than once in 24 hours. Better advice is to use one of the oral decongestants such as Eskornade when the need arises to tide him over a period of special importance. If he remains controlled on an oral antihistamine he should continue on this alone. But if these are not sufficient the remedies that have been found to help include Depo-Medrol (40 mg./ml.) 0.2-0.4 ml. injected into each inferior concha, zinc ionization, and the reduction of the inferior concha by galvanocautery. Endocrine therapy may help in menopausal cases, and psychological factors are often of importance. Skin tests for allergy and desensitization occasionally are found to be of value, but are often without benefit. In severe intractable cases operative measures such as trimming of the inferior conchae or vidian neurectomy may be considered.

*Zinc ionization.* This has rather gone out of fashion but I have found it a most useful treatment. The technique

has been described by Friel,<sup>1</sup> and again recently by Weir.<sup>2</sup> Success depends on attention to selection of cases and the technique of application. Where a marked septal deflection is present this treatment is unsuitable as the electrodes cannot be inserted, and if the main obstruction comes from the inferior conchae, linear cauterization is a better treatment. Zinc ionization possibly acts through a deep astringent action in the mucosa by the penetration of zinc ions carried in by the current.

The nose is sprayed with 10% cocaine to shrink the mucosa and to reduce discomfort. Ten minutes later, thin, flexible, flat zinc electrodes 2½ inches long and ½ inch wide are inserted, having first been covered with strips of white lint soaked in ½% zinc sulphate solution. Flat electrodes are considered superior to rods as they provide a more even distribution of the current over a larger area of mucosa and allow a greater total current to be passed without risk of local damage. The electrodes are kept along the floor of the nose so that no contact is made with the olfactory area lest anosmia be caused. The rest of the lower part of the nose is packed with more lint strips soaked in zinc sulphate solution. It is most important that the placing of the electrodes and the packing of the nose are done under direct vision by the rhinologist. Once this has been done the actual ionization may be supervised by a suitably trained assistant. The patient lies comfortably on a couch and is connected to a 9-13½-v. battery, the output from which can be varied continuously by a potentiometer, the current being measured by a milliammeter. The positive pole is connected to the zinc strips in the nose by miniature alligator clips, and the negative to a saline-soaked pad on the arm by means of a perforated lead sheet measuring 6 inches × 3 inches. The pad should consist of at least 6 layers of lint and must be applied smoothly to the skin to avoid excess current at points of pressure.

The patient is warned of the sensations he will experience: tingling in his nose and arm, and a metallic taste in the mouth. The current is turned on slowly and smoothly, any sudden fluctuations being unpleasant to the patient, and they may cause an illusion of flashes of light before the eyes. The initial treatment in the average case is 20-30 m/a for 10 minutes, but some patients will only tolerate a lesser intensity. This current is considerably more intense than that usually advised, but with the flat electrodes it has not been found in practice to be excessive. Three treatments are given at weekly intervals, the dose being increased 50% each time subject to tolerance. The patient is warned that the nose will be more blocked for the first 12-24 hours. The benefit obtained from this treatment is variable in duration, sometimes lasting only a few weeks but often many months, after which it can be repeated if required.

*Galvanocautery.* This is very effective in suitable cases, but only if it is applied with a clear concept of what is to be achieved. The patients who benefit are those with greatly enlarged inferior conchae where this can be shown to be due to mucosal swelling by pressure with a probe or by the shrinkage produced by cocaine.

Local anaesthesia is induced by packing the nose on the selected side with 10% cocaine, or even a small amount of a 20% solution. In my experience, cocaine is superior to

other agents; the haemostatic effect of cocaine is exercised deeper in the mucosa than that of adrenalin, and bleeding is rarely a problem if cocaine itself is used. A flat-bladed cautery point is employed at bright orange heat and its edge applied to the most prominent part of the inferior concha. A narrow burn is caused along the whole length of the concha and deepened until the electrode is felt everywhere to be in contact with bone. This contact with bone is most important as the objective is to produce a scar adherent to the bone, tethering the mucosa and preventing swelling. Care must be exercised to avoid touching the septum, or adhesions may be produced. The posterior end of the concha can be located by the fact that when the electrode is beyond it a bright glow is produced, but as it is drawn forward and touches the posterior end the electrode is cooled by contact with the mucosa. Firm lateral pressure on the electrode minimizes the risk of touching the septum, and, by constant movement backwards and forwards, sticking to the tissues is prevented.

After cauterization, Vaseline is applied twice daily to

the nostril to prevent formation of hard crusts. Scabs and fibrinous exudate may need removal a week later. The patient is warned to expect the treated side to be more blocked for a few days and that some blood-stained discharge may be experienced. Full benefit develops as the scar contracts, and improvement will continue up to 4 weeks. The second side can be cauterized when the first has become clear.

By measures such as these, patients who have been weaned from their drop addiction may in many cases be given sufficient relief so that the temptation to return to 'the bottle' will not arise.

#### SUMMARY

A simple treatment is described by means of which the nasal drop addict may be weaned from his drops. Some procedures found useful in the subsequent stage of the treatment of vasomotor rhinitis are discussed.

#### REFERENCES

1. Friel, A. R. (1948): *Zinc Ions in ENT Work*. Bristol: John Wright & Son.
2. Weir, C. D. (1967): *J. Laryng.*, **81**, 1143.