A review of 313 cases of nasal polyposis indicates that there is a high incidence of recurrence in this disease. Other nasal pathology affects a significant number of these patients. Simple surgical removal of the polypi by a transnasal route is the common mode of treatment.

Introduction
Most allergists and rhinologists will have realized that their treatment for patients with nasal polyposis is far from satisfactory. The chronicity of this disease is evident from the number of recurrences which one sees in the Out-Patient Department each week.

I have undertaken a review of all the cases who have presented at the Ear, Nose and Throat Hospital, Glasgow, with nasal polyposis during the period August 1965 to August 1968. Some of these patients attended with recurrent polyposis and many had other ear, nose or throat disease.

Treatment for patients with nasal polyposis is essentially symptomatic and recurrences are common despite the huge array of both medical and surgical treatments which are used today, 1965 (Walsh, 1950; Weille, 1955, 1965; Weille & Gohd, 1956; Hollander, 1962; Blumstein, 1966; Greenburg, 1966).

Results
During the period August 1965 to August 1968, 313 patients attended the Ear, Nose and Throat Hospital, Glasgow, with the diagnosis of nasal polyposis.

Two hundred and fourteen patients were male; ninety-nine were female. The ages of these patients ranged from 6 to 84 years (see Fig. 1).

* Present address: Senior Registrar, Ear, Nose and Throat Infirmary, Liverpool.

All patients presenting for the first time were placed on the waiting list to have the polypi removed by a transnasal approach, usually using a topical nasal anaesthetic.

One surgical removal of the polypi was performed on 167 (53 %) patients. Polypi were removed twice on eighty (26 %), three times on thirty-eight (12 %) and more than three times on twenty-eight (9 %) of the patients.

Of those specimens which were examined histologically it was not always possible to state whether they were of an allergic or infective origin and many showed evidence of both features.

Sixty-two patients had recurrence of their disease within 1 month of operation.

The time-interval between recurrences ranged from less than 1 month to 27 years, the average being 2 1/2 years.

Patients who had no recurrence of their nasal polyposis 1 month after operation were generally dismissed to be seen again as requested.

Bilateral nasal polyposis was found in 222 patients, unilateral disease in ninety-one.

FIG. 1. Age incidence of patients with nasal polyposis.
Clinical review

The average duration of symptoms admitted by the patient before attending the Out-Patient Department was 13 months.

The various operations carried out on these patients can be seen in Tables 1 and 2.

Neoplasms in the nose and nasopharynx may be removed as nasal polypi and the true diagnosis only realized when the specimens are examined histologically.

Several cases of squamous metaplasia, one case of carcinoma in situ and one case of invasive squamous carcinoma were reported histologically. In one instance a case of nasopharyngeal fibroma was described and in another, a case of plasmablastoma.

A case of capillary haemangioma and three cases of osteoma of the nasal cavity were removed at operation and proven histologically.

Discussion

This review of cases shows that nasal polyposis affects a wide age-group, males being more than twice affected than females.

Despite the fact that many authorities believe that allergy is responsible for nasal polyposis (Kern & Schenck, 1934; Stewart & Kawa, 1953, 1954; Hargrove, 1954; Silberg & Catchpole, 1956; Hajos, 1959; Schenck, 1959; Weisskopf & Burns, 1959; Hlavacek, 1962; Stewart, 1963; Sanders, 1964; Blumstein, 1966), there were ninety-one cases of unilateral disease which would tend to lend weight to an aetiology of localized disease such as local vasomotor imbalance, as suggested by Golding-Wood (1961, 1962) and Walsh (1950).

Medical treatment is widely used and advocated for this disease. The systemic or local uses of decongestants of an antihistaminic or adrenergic type were widely used in these patients (see Table 3).

The systemic use of steroids as suggested by Stewart & Kawa (1953, 1954), Dolowitz & Dougerty (1961) and Stewart (1963), and the local use of steroids as described by Stewart & Kawa (1954) and Myers (1958) have proved more useful in some cases.

I have treated a small number of patients suffering from recurrent nasal polyposis with systemic steroids in the form of prednisolone tablets. The dosage is started at a level of 5 mg t.i.d. for 7 days then 5 mg b.d. until the regression of symptoms stabilizes, usually about 2 more weeks. A progressively falling dosage is given until the lowest maintenance dosage compatible with keeping the patient symptom-free is reached, usually about 2–2.5 mg day. These patients have now been on treatment for periods ranging up to 2 years and all continue to be controlled. One marked benefit has been the return of the sense of smell.

The long-term effects of steroid drugs on the bones, however, must always be borne in mind. An attempt to desensitize the patients against specific allergens is indicated by Kern & Schenck (1934) and Hajos (1959), and is still widely used. Treatments using thyroid extract as suggested by Walsh (1950) or splenic extract as suggested by Stoll (1963), and the use of radiation therapy suggested by Hollander (1962) and Tarasov (1964) have never become generally accepted.

Surgery. No patient in this series managed to avoid surgical operation due to the action of medical treatment apart from steroids, when nasal polypi were present and producing symptoms.

However, the results show that the surgical treatment used in this series was often ineffective, only 53% of patients being ‘cured’ by one surgical removal of polypi; this is a lower figure than that suggested by Blumstein (1966).

Surgical removal of their polypi required the patients to stay in hospital for an average of 4–5 days. A simple transnasal removal with forceps or snare using topical nasal anaesthesia has been the usual treatment, as advocated by Wilson (1960) and Blumstein (1966).

The results show that this method is inadequate treatment for recurrent polyposis. Several reasons could be put forward to explain this fact, but since

---

### Table 1. Nasal operations performed on patients with nasal polyposis

<table>
<thead>
<tr>
<th>Antral washouts</th>
<th>SMR</th>
<th>Cautery or trimming of turbinates</th>
<th>Intranasal antrostomy</th>
<th>Radical antrostomy</th>
<th>Others: rhinoplasty; lateral rhinotomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>45</td>
<td>15</td>
<td>5</td>
<td>10</td>
<td>2</td>
</tr>
</tbody>
</table>

### Table 2. Other operations performed on patients with nasal polyposis

<table>
<thead>
<tr>
<th>Tonsillectomy</th>
<th>Stapedectomy</th>
<th>Mastoidectomy</th>
<th>Laryngoscopy</th>
<th>Suction clearance of middle ear</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
Clinical review

Table 3. Decongestant therapy

<table>
<thead>
<tr>
<th>Nasal drops or sprays</th>
<th>Systemic therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Antazoline sulphate</td>
<td>1. Triprolidine hydrochloride</td>
</tr>
<tr>
<td>Naphazoline nitrate</td>
<td>Pseudoephedrine hydrochloride</td>
</tr>
<tr>
<td>(Antistine-privine)</td>
<td>(Actifed)</td>
</tr>
<tr>
<td>2. Ephedrine hydrochloride</td>
<td>2. Diphenhydramine hydrochloride</td>
</tr>
<tr>
<td>Tramazoline hydrochloride</td>
<td>Benadryl</td>
</tr>
<tr>
<td>Dexamethazone</td>
<td>3. Pheniramine p-amino-</td>
</tr>
<tr>
<td>Neomycin</td>
<td>salicylate</td>
</tr>
<tr>
<td>(Dexarinhaspray)</td>
<td>(Daneral)</td>
</tr>
<tr>
<td>4. Phenylephrine hydrochloride</td>
<td>4. Ephedrine sulphate</td>
</tr>
<tr>
<td>Xylometazoline hydrochloride</td>
<td>Diphenylpyroline hydrochloride</td>
</tr>
<tr>
<td>Antazoline sulphate</td>
<td>Triluoperazine</td>
</tr>
<tr>
<td>(Otrivine-antistin)</td>
<td>(Expansyl)</td>
</tr>
<tr>
<td>Neomycin</td>
<td>5. Cyproheptadine hydrochloride</td>
</tr>
<tr>
<td>(Actifed)</td>
<td>Periactin</td>
</tr>
<tr>
<td>(Privine)</td>
<td>Phenergan</td>
</tr>
<tr>
<td>7. 2-Aminoheptane sulphate</td>
<td>7. Chlorpheniramine maleate</td>
</tr>
<tr>
<td>(Tuamine)</td>
<td>Piriton</td>
</tr>
<tr>
<td>8. Methoxamine hydrochloride</td>
<td>8. Triprolidine hydrochloride</td>
</tr>
<tr>
<td>(Vasylox)</td>
<td>Proactidil</td>
</tr>
<tr>
<td></td>
<td>9. Phenindamine tartrate</td>
</tr>
<tr>
<td></td>
<td>(Theophorin)</td>
</tr>
<tr>
<td></td>
<td>10. Phenylpropanolamine hydrochloride</td>
</tr>
<tr>
<td></td>
<td>Mepyramine maleate</td>
</tr>
<tr>
<td></td>
<td>Pheniramine maleate</td>
</tr>
<tr>
<td></td>
<td>(Triomicin)</td>
</tr>
</tbody>
</table>

sixty-two (19%) patients showed recurrence of their disease within 1 month of operation, I think it is not unlikely that this is because polypoidal mucosa could not be completely removed by the transnasal approach. Since no immediate medical treatment was administered post-operatively to try to control the pathological changes in the mucosa, the situation was ideal for a rapid recurrence of polyposis.

Many cases of recurrent polyposis involve the ethmoid sinus complex which is difficult to clear completely by a transnasal approach. Some form of ethmoidectomy, either by an external or transantral approach, would, with the help of the operating microscope, enable a more complete removal of disease to be performed.

Post-operative medical treatment in chronic cases, using steroids, would enable the nasal mucosa to recover by inhibiting the common pathological finding in nasal polypi, namely the accumulation of connective tissue ground substance (Weisskopf & Burns, 1959; Dolowitz & Dougherty, 1961).

Oral steroids, rather than ACTH as suggested by Stewart & Kawa (1953, 1954), would be more acceptable and would enable the patients to be followed up at intervals in the Out-Patient Department.

Electrocautery or trimming of the turbinates has not featured as a treatment for patients in this series, but is used at the Ear, Nose and Throat Hospital, Glasgow, where turbinate hypertrophy is present alone. Zinc ionization has not been used in this series of patients.

It is an interesting fact that eighty-two cases of septal deflection were found and this supports the claim of Gray (1967) that such a deformity is aetiological in the pathogenesis of nasal polyposis.

Conclusions

(1) Recurrence of nasal polyposis is common, occurring in 47% of patients.
(2) Simple transnasal polypectomy is inadequate treatment for recurrent polyposis.
(3) All specimens removed at operation should be examined histologically.

Acknowledgments

I would like to thank the Surgeons of the Ear, Nose and Throat Hospital, Glasgow, who allowed me to review their cases, and for their helpful comments.

I am also indebted to the office staff for their help in extracting the case records.

References


SANDERS, S.H. (1964) Nasal polyps. Eye, Ear, Nose Thr. Monthly, 43, 76 also 72 (March), 71 (April) and 90 (September).


Nasal polyposis

Gerald A. Brown

doi: 10.1136/pgmj.45.528.680

Updated information and services can be found at:
http://pmj.bmj.com/content/45/528/680

These include:

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/