HEADACHES FREQUENTLY ENCOUNTERED IN EAR, NOSE AND THROAT PRACTICE

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In his excellent book on "Headache", Wolff (1) lists the following causes for headache:

(1) Changes of intra-cranial pressure, tumors, inflammations, vascular accidents.
(2) Distention of the cranial arteries.
(3) Distention of the extra-cranial arteries.
(4) Spastic contractions of skeletal muscles.
(5) Ocular headaches.
(6) Sinus and nasal infections.
(7) Dental infections.

Among these, three are frequently encountered in ear, nose and throat practice: sinus headaches, headaches caused by distention of the extra-cranial arteries ("vaso-spastic headaches"), and spastic contraction of skeletal muscles (tension headaches).

The characteristic symptoms and management of these three types of headaches will be compared.

DIAGNOSIS OF HEADACHE:

(1) **Headaches of sinus or nasal origin.**

1. History and signs of nasal congestion.
2. Local tenderness over the frontal or maxillary sinuses.
3. Response to vaso-constrictors.
4. Unilateral or bilateral nature of the headache.

(2) **Distention of the extra-cranial arteries (vasospastic) headaches.**

1. The history of previous similar episodes.
2. The possible onset after an apparent clearing of a previous sinusitis.
3. Trigger points.
4. Unilateral nature.
5. The location (depending on the involved vessel).
   (a) Superficial temporal artery.
   (b) The middle meningeal artery.
   (c) The occipital artery.
6. Unilateral red eye and a stuffy nose.
7. The response to ergotamine, adrenalin, ephedrine, and methysergide.

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TABLE I. DIAGNOSIS OF HEADACHES

Type of Headache:	Sinusitis Headache	Vasospastic Headache	Tension Headache
History of Upper Respiratory Infection	Yes	No	No
Tenderness	Over sinuses	Occasional frontal	In neck muscles
Unilateral Headache	No	Yes	No
Nasal Obstruction	Bilateral	Unilateral	No
Nasal Discharge	Bilateral	Unilateral	No
Tearing	No	Unilateral	No

(3) **Skeletal muscle contraction (tension) headache.**

1. History of pre-existing factors.
   (a) Nervous tension.
   (b) Pre-existing infections and inflammations around the head and neck.
   (c) Trauma, usually around the neck muscles.
2. Location:
   (a) Occipital, with radiation forward.
   (b) Masseter, with aching in the face and jaws.
   (c) Pharyngeal, with tightness and aching of the throat.
   (d) Temporo-mandibular joint, with ear symptoms, burning tongue, and typical radiation of pain from the temporo-mandibular joint.

MANAGEMENT OF HEADACHE:

1. **Diagnosis**

The diagnosis of a headache very often depends upon the response to various drugs. The drugs which are of use in this respect are ephedrine, cocaine, atropine, and ergotamine. Table II outlines the use of these various drugs. Comparing the effects of these drugs, the use of ephedrine is of definite help in sinus headache whether used locally or by mouth. It has a moderate effect on vasospastic, but none on tension headaches. Cocaine will definitely relieve the pain of sinusitis and also will have a partial relief when used in the nasal passages of people with vaso-spasm. It has no effect on tension headaches. Ergotamine in tablet form or by injection is almost a specific help in the treatment of vasospastic headaches, but has no effect on tension symptoms or sinusitis. The atropine drugs are very helpful in the relief of pain due to tension headaches, but are little or no help with vasospastic or sinus symptoms. The use of ephedrine may lead to a deceptive situation. Ephedrine and other vaso-constrictors have a mild effect on the vasospastic drugs, and, therefore, the use of these drugs by mouth may lead to relief even when the condition is primarily vasospastic. It must be emphasized that in any particular headache there may be a vasospastic element and also an

TABLE II. RESPONSE TO DRUGS

Type of Headache:	Sinusitis Headache	Vasospastic Headache	Tension Headache
Ephedrine (topical-nasal)	Good	Poor	None
Ephedrine (oral)	Good	Slight	None
Cocaine (topical-nasal)	Good	Temporary	None
Ergotamine (oral or by injection)	None	Good	None
Methysergide (oral Sansert-Sandoz)	None	Good	None
Atropine (oral)	Slight	None	Good

element of skeletal muscle spasm, so that the use of any of these drugs may give partial relief, and the diagnosis must, therefore, be guarded in spite of such relief.

2. **The Clearing of Infection**
Regardless of the source, any type of headache will be made worse by a pre-existing infection in the sinuses, the nasal passages, the pharynx, or even with inflammation of the adjacent lymph nodes. This infection should be cleared as a prerequisite to further treatment.

3. **The Removal of Trigger Points**
Vasospastic headaches very often are found in people who have local irritations in the nasal or pharyngeal passages. A typical trigger point is a deviated septum or a dry spot in the nose caused by an abnormally enlarged nasal space. These dry spots may be anywhere in the nose or may frequently be found in the posterior pharyngeal wall. Blockage of the nasal passage with cotton will often cause temporary alleviation of the symptoms.

4. **Vasospastic Factors**
In any headache an element of spasm of the adjacent arteries may be present. This can be tested with the use of ergotamine and in cases of long-continued headache the use of methysergide is of diagnostic importance.

5. **Skeletal Muscle Spasm (Tension Headache)**
The treatment of tension headache has been gone into in great length by various authors, and the familiar compounds of atropine and various tranquilizers are effective. If necessary, psychotherapy can be considered.

6. **Education of the Patient**
Very often a patient will have a headache initially brought on by an attack of sinusitis. In any such headache vasospastic and tension symptoms may be superimposed. The patient can be of great help to the physician by being taught to recognize vasospastic or tension symptoms and by learning to use

the proper drugs. The use of atropine or ergotamine is no more difficult for a patient to learn than for the physician to prescribe, and in cases where headaches are severe, a great deal of difficulty can be prevented by proper education of the patient in the use of these drugs and the recognition of the symptoms.

CASE REPORTS

E.J., 55-year-old woman

Diagnosis: Vasospastic headache

Seen 2-9-60 with complaint of severe, recurrent pain centered in left temporal region, accompanied by left nasal congestion and tearing and redness of left eye. No evidence of nasal infection. Similar pains recurrent for 5 years. Headache temporarily alleviated by pressure over left superficial temporal artery.
Symptoms controlled by use of methysergide, 1 tablet daily. After 9 months — no headache.
In May 1964, same headaches, right side. On medication, with relief for several months. June 1966, recurrence of pain, right side, again relieved by methysergide.

H.M., 26-year-old male

Diagnosis: Sinusitis with secondary vasospastic headache

1-11-55: Pain, right, frontal, onset 3 weeks prior, after URI. Also had nasal congestion and postnasal discharge.
Examination disclosed subacute congestion, deviated septum (obstruction, right nasal passage) and reddened pharynx. X-rays — "right ethmoid cloudy".
Treatment — Proetz therapy with nose drops and propadrine capsules. By 1-28-65 the congestion and discharge had improved noticeably but headache persisted. Caffergot (ergotamine and caffeine) tablets relieved headache. No further symptoms after 2-15-55.
11-14-58 — right frontal headache, 12 days, (no URI), controlled by caffergot. Recurrences to 2/59). 10/59 — more recurrences, controlled by caffergot. 1-4-64 — occasional headache — now controlled by methysergide.

F.R., 26-year-old male

Diagnosis: Vasospastic headache

8-30-60. 3-4 years of chronic left-sided nasal obstruction and redness of left eye. Recurrent daily headaches of throbbing nature, centered in left temporal region. History suggestive of allergy. Had been treated (without relief) with antihistamines. Examination — no obstruction of septum. Turbinates on left side very engorged and reddened. Given methysergide with complete relief of symptoms. 11-15-60 — still unable to get along without methysergide, 4 tablets daily. Hospitalized and given I.V. histamine therapy 1 week with considerable relief. Now able to get along on two tablets daily. May 1961 — very few headaches. June 1961 — headaches worse again.
1966 — headaches recur frequently, apparently triggered by allergic rhinitis, controlled by antihistamines, methysergide.

J.G., 42-year-old male

Diagnosis: Vasospastic headache following an acute allergic rhinitis with deviated septum

12-8-65 — frequent URI and sore throats. Treated with oral antihistamines and desensitization with excellent symptomatic relief. 4-4-66 — awakened 3 nights in row by right temporal headache of throbbing nature. Also noted slight congestion, right side of nose. Examination — no evidence of infection; turbinates slightly boggy on right.
Given caffergot with complete relief.

M.B., 45-year-old woman

Diagnosis: Tension headache

6-24-65 — CC: headaches — ethmoid area — recurrent daily for years, accompanied by stuffy nose, no discharge, allergy negative. Examination — septum deviated to the left, no evidence of infection. Proetz therapy, nose drops, propadrine orally, with only a little relief. Caffergot — no help. Belladonna — slight help. Librium — complete relief.
11-9-65 — recurrence of headaches after URI, placed on nose drops, propadrine, and librium — with relief.
4-28-66 — occasional recurrences, controlled by librium.

J.C., 41-year-old male

Diagnosis: Chronic rhinitis secondary to deviated septum, tension headache.

11-21-56 — CC: Aching over head and neck, frontal headache, stuffy nose. Similar attacks 3-4 per year. Asymptomatic between attacks except for left nasal obstruction. Examination — chronic rhinitis, deviated septum. Allergy — negative. Diagnosis: (1) Chronic rhinitis — deviated septum. (2) Cervical tension headache.
Treated with Proetz therapy, nose drops and oral propadrine with relief of nasal symptoms. Aching of head and neck relieved by addition of meprobamate. Seen in 1957, 1960, 1962, 1963, 1964, with similar complaints. Advised septum surgery several times.

A.W., 49-year-old woman

Diagnosis: Chronic sinusitis with secondary vasospastic and tension elements.

12-1-59 — CC: Headaches in frontal and ethmoidal areas, recurrent daily for years. Also has bilateral nasal congestion and discharge, with frequent sore throats.
First diagnosis: Chronic rhinitis secondary to deviated septum.
On Proetz therapy, with nose drops and oral propadrine, nasal symptoms cleared except for residual headaches. X-rays — "thickened lining both antra and ethmoids". 1-11-60 — bilateral antrum irrigation — clear. 1-19-60 — still getting headaches. Placed on caffergot, with partial relief. 2-9-60 — part of headache persists, even with methysergide. 3-8-60 — meprobamate added, with complete relief. Meprobamate alone gives only partial relief.

REFERENCE

1. Wolff, H. G. Headache, Oxford University Press, 1948.