HEADACHE AND PEPTIC ULCER

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HEADACHE is one of the most common symptoms of an underlying nervous tension state. For all practical purposes, chronic or recurrent headache is due to one of two mechanisms: (1) excessive dilatation of extracranial arteries, or (2) excessive tension in the muscles of the head and neck. In the past, many organic causes have been listed and the medical literature is filled with reports stressing the frequency of head pain due to disease processes in the eyes, sinuses, nasal structures, and teeth. Head trauma and injuries to the neck have been incriminated as frequent causes of headache. Even such conditions as glandular disease, gastrointestinal disorders, and pelvic disease have been listed as common causes of headache. The truth is that all such "organic" diseases have very little to do with the production of headache. The noxious stimuli are almost always cerebral in origin and produce the excessive vasodilatation or increased muscle tension resulting in pain by humoral or nervous mechanisms not yet well understood. Headache is truly a disease of civilization and stress.

Peptic ulcer is another well-recognized disease of civilization. Although it is commonly regarded as a specific disease, it might be more accurately thought of as another manifestation of nervous tension state. It has often been said that it is relatively easy to heal an ulcer, but most difficult to prevent its recurrence. When medical treatment fails, the problem can often be handled quite satisfactorily by surgical procedures designed to inhibit gastric hypersecretion. This can be accomplished either by interruption of vagal stimulation from the higher centers (vagotomy) or by removing the source of hormonal stimulation (gastric resection).[1]

Why is it then, that a brilliant surgical result insofar as cure of the ulcer is concerned, fails to produce a healthy patient in many instances? In a considerable number of cases, even the most critical observer must admit that the stomach trouble has been relieved—but the patient has new symptoms related to the tension state that has not been influenced by the surgeon's knife. Headache, fatigue, and depression sometimes occur after cure of the peptic ulcer. It is only natural that in follow-up reports after surgical procedures designed for the relief of ulcer, attention is focused on what happens to the ulcer, rather than on what happens to the patient.

It is the experience of every surgeon that some patients do not get well even when the ulcer is cured. In desperation, he then turns to his medical colleagues for help. It is not surprising that headache may be a bothersome symptom after the ulcer has been controlled. In the course of a year we have had the opportunity to see a number of patients who "refused to get well" after a very successful operation.

This report is concerned with seven patients who were subjected to vagotomy for peptic ulcer and in whom an excellent initial result was obtained. However, all of these patients returned with a complaint of headache.

CASE REPORTS

Case 1. A 62 year old man first seen in January 1951, with ulcer history of 31 years' duration. Gastroenterostomy had been performed in 1926. Since 1926, seven episodes of massive hemorrhage, four of them in the last one and a half years. Diagnosis of marginal ulcer made and vagotomy performed February 20, 1951. Excellent postoperative result.

Seen July 14, 1953 (17 months postoperatively), with chief complaint of headache. History of life-long periodic sick headache more severe during past year. Present headache two to three times weekly awakening him early in morning.

Diagnosis: Chronic nervous tension state. Extracranial vascular headache.

Case 2. A 31 year old woman first seen August 1946. Epigastric pain of six months' duration. Diagnosis of duodenal ulcer made. Next seen February 4, 1948, with history of three bouts of massive hemorrhage. Vagus resection and pyloroplasty performed February 11, 1948. Convalescence uneventful; follow-up revealed no further gastrointestinal trouble and patient very pleased with the results of operation.

June 1952, still free of gastrointestinal symptoms, but having severe headache. History of sick headache many years, but became worse during past year.

Diagnosis: Chronic nervous tension state. Extracranial vascular headache.

Case 3. A 26 year old man was first seen in January 1950. History indicated onset of ulcer symptoms in 1945, with massive hemorrhages in 1947, 1948, 1949. Vagotomy and gastroenterostomy performed January 31, 1950. Excellent result; no further ulcer trouble. Last seen February 1952, with chief complaint of headache. History of some headache since 1944 but much worse during past year.

Diagnosis: Chronic nervous tension state. Muscle tension headache.

Case 4. A 51 year old man first seen in July 1950. Three episodes of melena—1945, 1948, and July, 1950. Diagnosis of chronic duodenal ulcer and cholelithiasis. In October 1950, vagotomy, posterior gastrojejunostomy and cholecystectomy performed. No symptoms until August 1951, then developed irritable colon. In January 1952, chief complaint related to headache of 12 years' duration, but more severe during past year.

Diagnosis: Chronic nervous tension state. Muscle tension headache.

Case 5. A 32 year old man first seen in 1943, with periodic epigastric distress of 15 years' duration and occasional headache. Diagnosis of chronic duodenal ulcer and irritable bowel. In 1944 gastrointestinal symptoms improved but chief complaint of nervousness and weak spells. Diagnosis of neurocirculatory asthenia. Seen in October 1951, with chief complaint of headache coming on after vagotomy for duodenal ulcer performed elsewhere, March 1949. Patient blamed headache on vagotomy.

Diagnosis: Chronic anxiety tension state. Muscle tension headache.

Case 6. A 45 year old man first seen February 1949, with ulcer history of 12 years' duration. Periodic headache as long as he could remember, but constant the past year.

Vagus resection and pyloroplasty performed April 1949. In June 1949, no symptoms related to gastrointestinal tract but headache worse. In May 1951, complete examination because of epigastric burning and headache. Diagnosis of chronic nervous tension state. In August 1951, hospitalized for bacterial pneumonia; no headache during this period.

July 1952, readmitted to hospital with evidence of duodenal obstruction. Gastroenterostomy performed; obstruction found to be due to adhesions; no evidence of ulcer. Headache disappeared during hospitalization. Last seen January 1954, with recent fracture of right hip and peroneal palsy. No gastrointestinal symptoms; no headache.

Diagnosis: Chronic nervous tension state. Muscle tension headache.

Case 7. A 44 year old man first seen in August 1949. Ulcer symptoms since 1939; gastric resection in November 1946. Relief for seven months, then return of symptoms. Diagnosis of marginal ulcer made in August 1949; vagotomy performed September 1949. Three-fourths of stomach still present; marginal ulcer 2 cm. in diameter. October 1949, listed as "perfect result" from standpoint of gastrointestinal symptoms. However, complained of occipital headache, worse since surgery. Diagnosis of chronic nervous tension state with muscle tension headache.

In March 1951, no mention of headache but chief complaint of tiredness and weakness.

Last seen October 1951 (two years postoperatively); very little trouble with stomach, but symptoms everywhere else. Still having headache.

Diagnosis: Severe anxiety neurosis.

COMMENT

The case histories have been condensed, and only the bare facts stated. However, each of the patients had considerable difficulty with life adjustment, and the complete history disclosed many tensions, frustrations, and personality difficulties. The disease was not primarily peptic ulcer; the ulcer was only a manifestation of the underlying disorder and when it was removed, another symptom took its place.

Menninger[2] stated this concept quite clearly when he wrote that neither the peptic ulcer nor the colitis and associated depressive or paranoid states are in themselves the disease; the disease is a defective total life adjustment. Brosin[3] points out the concept of a psychosomatic affliction as a partial manifestation of maladaptation to life stress by the human organism. This mechanism often permits the person to carry on his job and domestic duties in conventional ways. As an example, he listed the frequency with which chronic alcoholics in "dry" periods show depressive states. It is not infrequent that a chronic alcoholic who has ceased drinking because of participation in Alcoholics Anonymous or by some other means, suffers from recurrent headache.[4]

It will be noted that of the seven patients listed, five suffered from muscle tension headache and only two from the generally more common extracranial vascular headache. It is of interest, and probably of significance, that all of the patients had some trouble with headache prior to surgery; the headache became *worse* after the ulcer symptoms were controlled. It is not to be construed that vagotomy per se has anything to do with the production of headache; although no figures are available, it is our opinion that such a problem would be as frequently encountered after gastric resection for peptic ulcer, or after resection of the colon for ulcerative colitis. The disease has not been removed and the individual requires another symptom to facilitate adjustment in a socially acceptable manner.

Unfortunately, there are those who still demand an "organic" explanation for headache and find it difficult to believe that severe pain can be produced by "functional" conditions. Fortunately, the terms "functional" and "organic" are rapidly losing their strict meanings, for such a division can serve no useful purpose. Headache produced by sustained contractions of the scalp and neck muscles is usually emotionally induced, though it need not be. This type of headache has been blamed on osteoarthritis, errors of curvature of the cervical spine, posture, and a variety of other causes. Since it is observed rather commonly in conjunction with duodenal ulcer, and in a relatively young age group, the proponents of organic cause would be hard-put to explain why people with duodenal ulcer should develop arthritis or show errors in cervical curvature more commonly than individuals in the general population. Or why they should have more frequent neck trauma, or more "neuralgia."

The surgeon should not be criticized for using any means at his disposal to try to effect a cure of peptic ulcer, nor should he be too concerned when a brilliant result is marred by the development of some other symptom—especially headache. After all, even in the patients reported here, a serious painful disorder has been converted to a benign painful disorder—and that represents a considerable gain. Headache is the social excuse par excellence and has been for centuries; it is a very helpful device. Perhaps the overenthusiastic clinician should be warned against trying to take away this helpful prop lest the whole personality crumble in a fit of depression or psychotic episode.

SUMMARY

1. Seven patients with peptic ulcer who were subjected to vagotomies and in whom excellent results were obtained as measured by disappearance of gastrointestinal symptoms and healing of the ulcers, were later seen with chief complaints of headache.

2. The headaches could be classified as being due to sustained muscle contractions of the head and neck in five cases, and extracranial vascular in type in two cases.

3. The basic disease in these patients is neither peptic ulcer nor headache; it is a defect in total life adjustment.

References

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3. Brosin, H. W.: Prognosis in some psychosomatic diseases. Ann. Int. Med. **37**: 745-750 (Oct.) 1952.

4. Unpublished data.