

Walk Headache: An Unusual Manifestation of Ischemic Heart Disease

D. Vernay,* D. Deffond,* P. Fraysse,** and G. Dordain*

SYNOPSIS

A 71 year old man sought neurological advice because for two years he had suffered from headache every time he made an effort. A treadmill stress test showed a relation between effort, headache and depression of ST segments on E.C.G. With isosorbide dinitrate and diltiazem, the manifestations improved. This suggests a referred head pain due to myocardial ischemia.

(*Headache* 29:350-351, 1989)

INTRODUCTION

Headache brought on by effort is named "cough headache" by English and American authors¹ and "céphalée d'effort"² by French authors. This sort of headache is precipitated almost immediately by exertion requiring gasping for breath such as coughing, sneezing or lifting a heavy weight. Once this effort is terminated the headache quickly resolves.

The disease has been ascribed to dural traction or to a rapid increase in the size of the cerebral ventricles and in the pressure of the cerebrospinal fluid, due to increased intrathoracic pressure during gasping for breath. Cough headache is sometimes caused by a posterior fossa tumor or a malformation (Arnold-Chiari syndrome and syringomyelobulbia) but it is often primary, particularly in men in their forties.^{1,2}

REPORT OF A CASE

A 71-year-old man sought neurological advice because for two years he had suffered from headache every time he made an effort. He was a heavy smoker. He experienced occipital, parietal and frontal headache when he walked and, occasionally, during post-prandial periods; it was precipitated by exposure to cold but not by the common causes of cough headache (coughing, lifting heavy weights). Headache while walking disappeared after two or three minutes' rest, and a new attack invariably fol-

*Service de Neurologie. Pr. Dordain. Hôpital Nord - C.H.U. de Clermont-Ferrand.

**Service de Médecine Interne. Pr. Cheminat. Hôpital Sabourin - C.H.U. de Clermont-Ferrand.

Reprint requests to: Dr. D. Vernay - Service de Neurologie (Pr. Dordain), Hôpital Nord - C.H.U. de Clermont-Ferrand. BP 145 - 63020 Clermont-Ferrand Cedex - France.

Accepted for Publication: February 23, 1989.

lowed one or two minutes after he had started to walk again. The patient also described shoulder numbness with radiation to both arms when he made sustained efforts. He may also have had one attack of substernal tightness but when headache was not the sole manifestation it was still the first to appear and the worst.

Physical examination, including funduscopy, was normal. Erythrocyte sedimentation rate was 3 mm/hour. CT scan, E.E.G. and ultrasonographic study of the cervical blood vessels revealed no abnormality. E.C.G. showed a Q wave in lead S3 and chronic antero-apical ischemia. Three minutes after the beginning of treadmill stress testing, the patient suffered from headache and, simultaneously, ECG showed a two millimeter depression of ST-segments. During the test maximal blood pressure was 185/90.

After two-months of treatment with isosorbide dinitrate 40 mg daily and diltiazem 30 mg daily, the patient was able to perform sub-normal activity without headache, and said his life was "transformed." A new treadmill stress test gave the same results as before, but after 5 minutes 45 seconds, so the dosage of isosorbide dinitrate was increased to 80 mg daily. With this treatment the patient suffered from headache only after great exertion. A year later this is still the case.

COMMENT:

It is known that pain in the arms and jaw may be a referred pain due to myocardial ischemia, but an isolated pain in the skull usually is not considered a manifestation of angina pectoris.³ Two similar cases can be compared with ours^{4,5} (Table 1).

In addition, Paulson and Klawans⁶ reported a case in which orgasmic headache ceased following introduction of isosorbide dinitrate in the treatment of cardiovascular disease.

The hypothesis of involuntary Valsalva maneuvers (due to chest pain), which might increase the intracranial pressure⁶ is improbable in this case since the headache occurred independently of any other pain, and because a Valsalva maneuver does not bring on headache. Moreover relations between effort and headache were not the same in this case as in effort headache (cough headache).