

Grazia Sances  
Natascia Ghiotto  
Marianna Loi  
Elena Guaschino  
Enrico Marchioni  
Teresa Catarci  
Giuseppe Nappi

## A CARE pathway in medication-overuse headache: the experience of the Headache Centre in Pavia

Published online: 20 July 2005

G. Sances (✉) • N. Ghiotto • M. Loi  
E. Guaschino  
Headache Unit, IRCCS Institute of  
Neurology “C. Mondino” Foundation,  
Via Mondino 2, I-27100 Pavia, Italy  
e-mail: grazia.sances@mondino.it  
Tel.: +39-0382-380207  
Fax: +39-0382-380286

G. Sances • N. Ghiotto • M. Loi  
E. Guaschino • E. Marchioni • T. Catarci  
G. Nappi  
University Centre for Adaptive Disorders and  
Headache (UCADH) Section of Pavia,  
IRCCS Institute of Neurology “C. Mondino”  
Foundation, Pavia, Italy

G. Nappi  
Department of Clinical Neurology and ORL,  
University “La Sapienza”, Rome, Italy

**Abstract** Medication-overuse headache (MOH) is one of the headache forms that most frequently prompts patients to consult a specialist headache centre. The prevalence of this form in the general population is approximately 1%–2%. Around 40% of patients seen at headache centres present with a chronic form of headache and 80% of this chronic headache patients make excessive use of symptomatic drugs. MOH shows a clinical improvement, accompanied by a reduction in the consumption of analgesic drugs, if patients are submitted to detoxification therapy. But detoxification is only the first stage in a long and complex course of care and global approach demands adequate follow-up visit to prevent early relapses. At the Headache Centre of the C. Mondino Institute of Neurology in Pavia, a course of care (CARE) has been

developed for the complete management of patients with MOH both during Hospitalization and during the subsequent follow-up period. CARE is designed to trace the clinical, psychopathological and pharmacological profile of MOH in the short-, medium- and long-term; to look for factors possibility predictive of relapse; to assess the direct costs linked to overuse-headache in the year leading up to and following detoxification; and to evaluate disability, in terms of working days lost, before and after detoxification.

**Key words** Medication-overuse headache • Care pathway • Management

Medication-overuse headache (MOH) [1] is one of the headache forms that most frequently prompts patients to consult a specialist headache centre. Literature data indicate an approximately 1%–2% prevalence of MOH in the general population [2–4]. Around 40% of patients seen at headache centres present with a chronic form of headache and 80% of these chronic headache patients make exces-

sive use of symptomatic drugs [4]. A 2003 study by Dowson on the profile of patients seen at UK headache centres revealed that 60% suffer from a chronic form of headache and that 66% of these chronic headache sufferers regularly use analgesics [5].

The literature contains few long-term observational studies investigating the risk of relapse into overuse.

Schnider et al. [6], reporting the longest follow-up to date (5 years), found that 39.5% of patients relapsed into drug overuse, and also that frequency and intensity of headache changed substantially within the first two years of drug withdrawal. In a prospective study, conducted after the introduction of the triptans into clinical practice, Katsarava et al. [7] showed that relapse into overuse occurred within 6 months of detoxification in 31% of patients, and within a year in 36%; the same author, in a subsequent study, reported a relapse rate of 45% at 4 years [8].

Overall, the literature data seem to indicate that there is a high risk of relapse in the first year following detoxification.

MOH shows a clinical improvement, accompanied by a reduction in the consumption of analgesic drugs, if patients are submitted to detoxification therapy. But detoxification is only the first stage in a long and complex course of care and a global approach demands adequate follow-up visits to prevent early relapses.

At the Headache Centre of the C. Mondino Institute of Neurology in Pavia, a course of care (CARE) has been developed for the complete management of patients with MOH both during hospitalisation and during the subsequent follow-up period. CARE is designed to trace the clinical, psychopathological and pharmacological profile of MOH patients; to evaluate the therapeutic efficacy of detoxification; to establish the percentage of patients presenting with relapses of MOH in the short-, medium- and long-term; to look for factors possibly predictive of relapse; to assess the direct costs linked to overuse headache in the year leading up to and following detoxification; and to evaluate disability, in terms of working days lost, before and after detoxification.

All patients with a possible diagnosis of MOH admitted for the first time to the Headache Unit at the C. Mondino Institute of Neurology are being recruited for this study. All those enrolled are admitted as inpatients for an initial period of 8–10 days, during which they undergo infusion-detoxification therapy. Using an *ad hoc* data sheet, a comprehensive personal and family history of the patient is taken, as well as details of his or her headache and drug use. Each patient is administered specific questionnaires investigating quality of life and disability. Patients are also asked to supply information relating to working days lost or on which they worked at suboptimal

efficiency due to their headache, and to expenses incurred in the past as a result of their headache (tests, examinations, hospital stays, drugs).

Upon entry to the study, each patient undergoes a standard battery of tests to evaluate the presence of drug abuse/dependence disorders (semi-structured interview, DSM-IV), the presence of comorbid psychopathologies and personality profile (MMPI-2).

The patient is then submitted to infusion-detoxification therapy daily throughout the period of hospitalisation (8–10 days depending on the case). Any abstinence symptoms, pain and neurovegetative symptoms such as nausea and vomiting are appropriately controlled. Preventive therapy is initiated during the hospital stay.

The course of care also includes rehabilitative counselling and the imparting of instructions for the post-discharge period. On discharge, each patient is given: (1) a treatment regimen to be followed at home; (2) a letter informing the patient's GP of his or her participation in the programme; (3) the dates of recall scheduled during the planned observation period; (4) a diary for recording days with headache, use of symptomatic drugs and days of menstruation.

The diagnosis of MOH is confirmed 2 months after discharge. On all follow-up visits the course of the headache is checked, considering number of days with headache and use of symptomatic drugs, and, if necessary, the treatment regimen is reviewed.

To prevent patients from altering, independently, their treatment regimen (and thus their clinical course), they are also contacted by telephone in between visits.

At the present time, 113 patients (91 women and 22 men, mean age  $44.8 \pm 11.1$  years) have been recruited. Their drug overuse can be subdivided as follows: 24.8% triptans, 24.8% analgesics, 2.6% opioids, 31.9% combination analgesics, 2.6% combinations of acute medications and 13.3% more than one overuse.

Our preliminary findings indicate good compliance on the part of the patients, who appreciate, above all, the fact that they are always seen by the same doctor, the scheduling of the visits and the intermediate contacts by telephone. Only 4 patients have been lost to follow up.

**Acknowledgement** This study was supported by a grant from the Italian Ministry of Health (RC2004/2005).

## References

1. Headache Classification Subcommittee of the International Headache Society (2004) The International Classification of Headache Disorders, 2nd edn. *Cephalalgia* 24[Suppl 1]:1–160
2. Lu SR, Fuh JL, Chen WT, Juang KD, Wang SJ (2001) Chronic daily headache in Taipei, Taiwan: prevalence, follow-up and outcome predictors. *Cephalalgia* 21(10):980–986
3. Castillo J, Munoz P, Guitera V, Pascual J (1999) Epidemiology of chronic daily headache in the general population. *Headache* 39(3):190–196

- 
4. Pascual J, Colas R, Castillo J (2001) Epidemiology of chronic daily headache. *Curr Pain Headache Rep* 5(6):529–536. Review
  5. Dowson AJ (2003) Analysis of the patients attending a specialist UK headache clinic over a 3-year period. *Headache* 43(1):14–18
  6. Schnider P, Aull S, Baumgartner C, Marterer A, Wober C, Zeiler K, Wessely P (1996) Long-term outcome of patients with headache and drug abuse after inpatient withdrawal: five-year follow-up. *Cephalalgia* 16(7):481–485
  7. Katsarava Z, Limmroth V, Finke M, Diener HC, Fritsche G (2003) Rates and predictors for relapse in medication overuse headache: a 1-year prospective study. *Neurology* 60(10):1682–1683
  8. Katsarava Z, Muessig M, Dzagnidze A, Fritsche G, Diener HC, Limmroth V (2005) Medication overuse headache: rates and predictors for relapse in a 4-year prospective study. *Cephalalgia* 25(1):12–15