Fatigue, sleep-wake pattern, depressive and anxiety symptoms and body-mass index: a multi-parametric analysis in a sample of episodic and chronic migraine patients.

C. Lucchesi, F. Baldacci, M. Cafalli, E. Dini, G. Siciliano, U. Bonuccelli, S. Gori.

Department of Clinical and Experimental Medicine, Neurology Unit, University of Pisa, Pisa, Italy.

Introduction

Migraine clinical presentation, as well as life-time disease course, can be highly heterogeneous, with a subgroup of patients developing chronic migraine; moreover, migraine clinical spectrum is expanded by the association with different comorbid/coexisting conditions and interictal dysfunctions, affecting migraine clinical profile.

Objectives

Aim of this study was to systematically evaluate different clinical parameters, among which migraine clinical features, body mass index (BMI), sleep pattern, daily functioning parameters, presence of depressive and anxiety symptoms, in a sample of episodic and chronic migraine patients and their reciprocal interactions.

Materials and Methods

One hundred and fifty patients with a diagnosis of migraine without aura were enrolled; 75 patients fulfilled criteria for episodic migraine and 75 for chronic migraine (ICHD-3 beta). Data regarding age, gender, BMI, monthly frequency of migraine attacks and disease duration were collected. Migraine-related disability, fatigue, daily sleepiness, subjective sleep quality, cronotype, presence of anxiety and depressive symptoms were, respectively, evaluated using the following validated questionnaires: Migraine Disability Assessment Score (MIDAS), Fatigue Severity Scale (FSS), Epworth Sleepiness Scale (ESS), Pittsburgh Sleep Quality Index (PSQI), reduced Morningness-Eveningness Questionnaire (rMEQ), Generalized Anxiety Disorder 7-item scale (GAD-7), Patient Health Questionnaire 9-item scale (PHQ-9).

Results

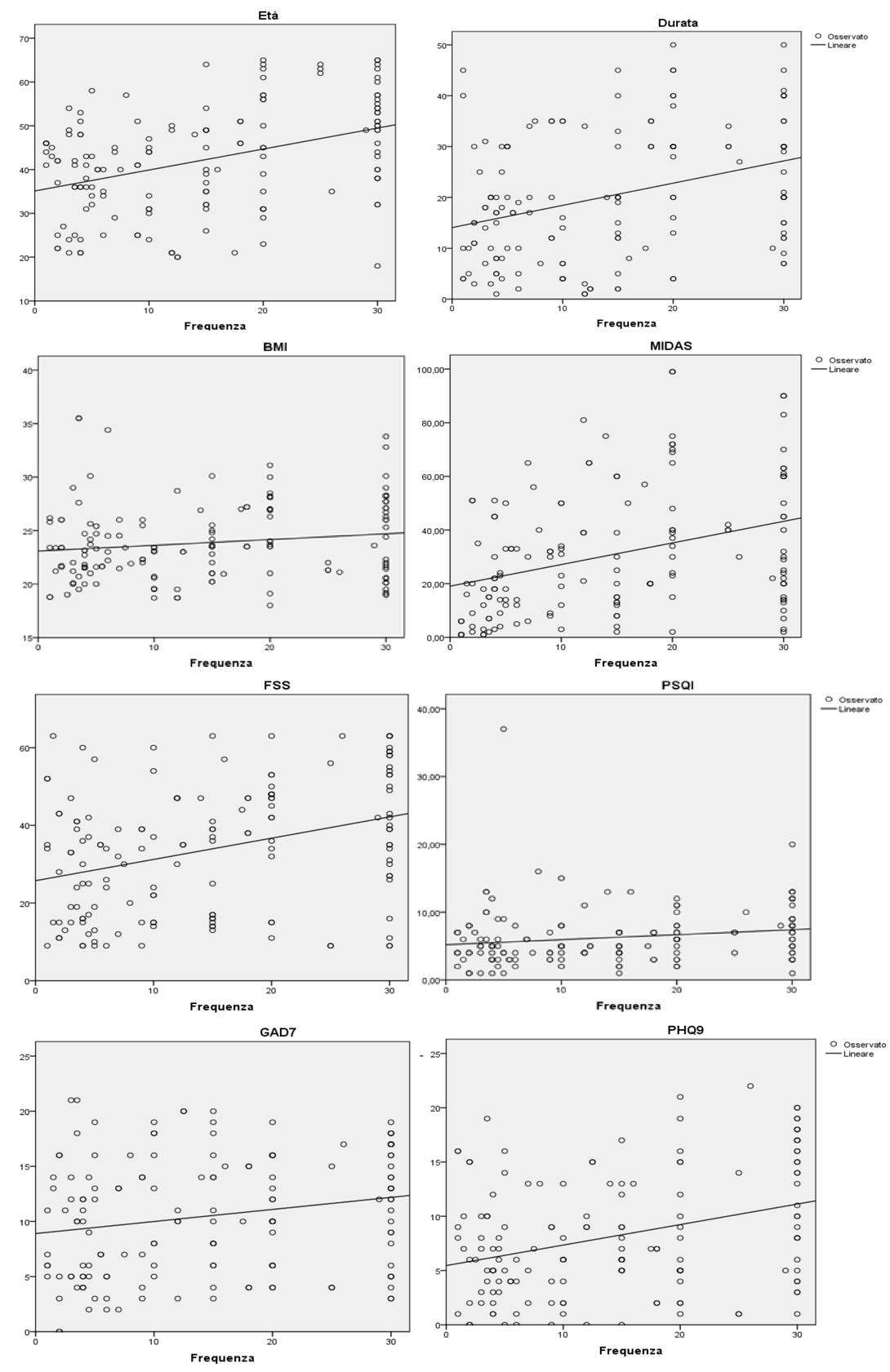
Mean age (p=0,012), disease duration (p<0,001), BMI score (p=0,012) and MIDAS score (p=0,005) were significantly higher in chronic compared to episodic migraineurs. Furthermore, mean FSS score (p<0,001), PSQI score (p=0,015), GAD-7 score (p=0,019) and PHQ-9 score (p<0,001) were higher in chronic migraine patients, whereas no statistically significant differences were documented in gender distribution, mean ESS and rMEQ scores between episodic and chronic migraineurs.

A correlation analysis (Rho coefficient of Spearman) carried out in the total sample of 150 migraine subjects, documented a statistically significant, positive correlation between monthly frequency of migraine attacks and patients age (p<0,001), disease duration (p<0,001), BMI score (Rho 0,177, p=0,049), MIDAS score (p<0,001), FSS score (p<0,001), PSQI score (p=0,006), GAD-7 score (p=0,019) and PHQ-9 score (p<0,001).

Discussion and conclusions

Data from the present report expand the concept of migraine as a continuum or spectrum, with greater occurrence of fatigue, poor sleep quality, anxiety and depressive symptoms and higher BMI score in chronic migraine patients. Further research is certainly necessary in order to better define the biological basis underlying the complex and multidirectional relationship between migraine, fatigue, sleep and appetite regulation and anxiety and depressive symptoms, as well as their possible role in the process of migraine transformation from episodic to chronic pattern.

	Episodic Migraine (Mean±SD)	Chronic Migraine (Mean±SD)	p
Age (years)	37,94±10,08	47,18±13,21	0,012
Disease duration (years)	16,13±11,09	25,81±13,34	<0,001
BMI score (kg/m^2)	23,15±3,37	24,58±3,65	0,012
Frequency (days/month)	5,60±3,22	23,23±6,35	<0,001
MIDAS score	24,38± 23,49	37,86±28,50	0,005
FSS score	28,22±14,70	39,70±16,17	<0,001
PSQI score	5,90±5,21	6,84±3,61	0,015
GAD-7 score	9,37±5,52	11,54±4,94	0,019
PHQ-9 score	6,37±4,65	10,13±5,91	<0,001



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