

The role of migraine-associated symptoms in the clinical pattern of migraine pain

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Introduction

Migraine is a disorder of the multisensory integration of the somatosensory, visual, auditory, olfactory stimuli, which can later cause various combinations of symptoms: headache, photophobia, phonophobia, nausea/vomiting, osmophobia, which distinguish it from other types of headaches.

Keywords

Migraine, associated symptoms, intensity, duration, headache.

Purpose

Highlighting the particularities of the pain phenomenon and the associated symptoms in patients with migraine (frequency, duration and severity of the migraine symptoms).

Grade of associated symptom by headache pain

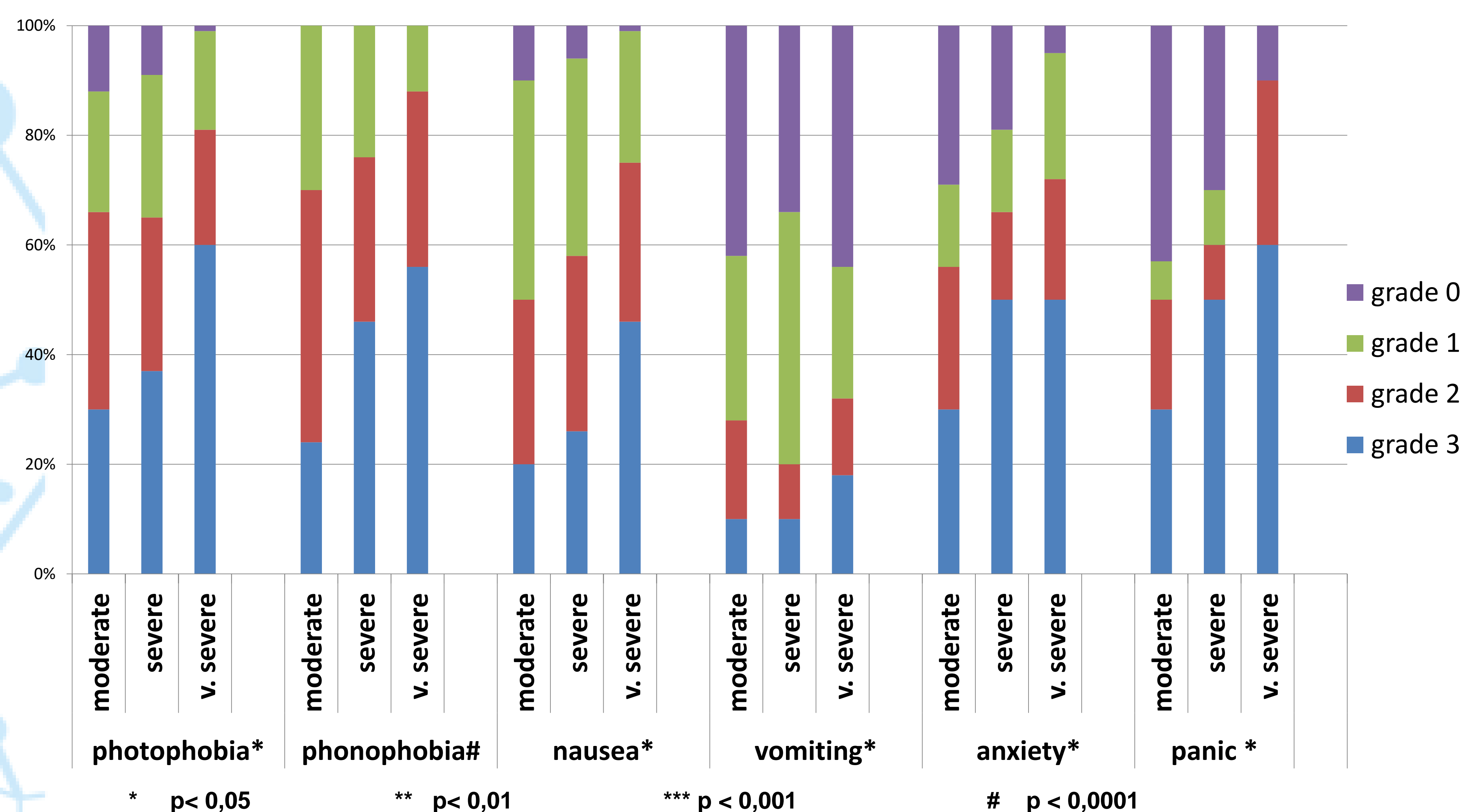


Fig. 1. Headache intensity expressed as moderate (4-6 /10), severe (7-9 /10) and very severe (10/10) vs. the grade of associated symptoms (0-3). χ^2 significant values are shown.

Material and methods

94 patients with migraine were included in the cross-sectional study. Research methods used: clinical (neurological history, objective neurological examination); descriptive (description of the results); statistical (evaluation questionnaires for migraine patients were used as a research tool). The primary data were introduced into Excel and processed in MedCalc.

Results

Positive correlations were identified between headache intensity and associated symptoms: nausea ($R_{xy}=+0.36$, $p<0.05$), vomiting ($R_{xy}=+0.25$, $p<0.05$), photophobia ($R_{xy}=+0.36$, $p<0.05$), phonophobia ($R_{xy}=+0.52$, $p<0.0001$), anxiety ($R_{xy}=+0.24$, $p<0.05$), panic ($R_{xy}=+0.26$, $p<0.05$). There were positive correlations between the duration of the headache (attack) in hours and the symptoms associated with migraine: anxiety ($R_{xy}=+0.34$, $p<0.01$), dysfunctional respiratory syndrome ($R_{xy}=+0.33$, $p<0.01$). Statistically significant positive correlations were determined between headache intensity and pain character: oppressive ($R_{xy}=+0.28$, $p<0.05$), stinging ($R_{xy}=+0.24$, $p<0.05$) and pulsing ($R_{xy}=+0.24$, $p<0.05$).

Conclusions

The presence and intensity of the migraine pain event was related to the presence and intensity of the associated symptoms (photophobia, phonophobia, nausea, vomiting, anxiety and panic). Unlike intensity, headache duration in hours correlated only with anxiety and dysfunctional respiratory syndrome. Pulsing pain quality correlates positively with phonophobia. The results support the headache modular theory, which shows that different neuron modules forming the clinical expression of migraine attacks can be activated.

Variable	N	Throbbing	Oppressive	Stinging	Pulsing
Nausea	56	$R_{xy}=+0,28$ *	$R_{xy}=+0,27$ *	$R_{xy}=+0,06$	$R_{xy}=+0,35$ **
Vomiting	13	$R_{xy}=+0,46$ ***	$R_{xy}=+0,07$	$R_{xy}=+0,07$	$R_{xy}=+0,32$ **
Photophobia	53	$R_{xy}=+0,17$	$R_{xy}=+0,34$ **	$R_{xy}=+0,27$ *	$R_{xy}=+0,46$ ***
Phonophobia	68	$R_{xy}=+0,24$ *	$R_{xy}=+0,42$ ***	$R_{xy}=+0,26$ *	$R_{xy}=+0,54$ #
Osmophobia	30	$R_{xy}=+0,42$ ***	$R_{xy}=+0,16$,	$R_{xy}=+0,25$ *	$R_{xy}=+0,39$ ***
Neck pain, stiffness	33	$R_{xy}=+0,28$ *	$R_{xy}=+0,37$ **	$R_{xy}=+0,23$ **	$R_{xy}=+0,32$ **
Associated tearing of one eye	10	$R_{xy}=-0,07$	$R_{xy}=+0,09$	$R_{xy}=-0,15$	$R_{xy}=+0,28$ *
Dizziness or vertigo	29	$R_{xy}=+0,07$	$R_{xy}=+0,26$ *	$R_{xy}=0,00$	$R_{xy}=+0,11$
Lack of air	21	$R_{xy}=+0,35$ **	$R_{xy}=+0,21$	$R_{xy}=+0,06$	$R_{xy}=+0,18$
Associated tearing of eyes	20	$R_{xy}=+0,20$	$R_{xy}=+0,02$	$R_{xy}=+0,20$	$R_{xy}=+0,36$ **

* $p < 0,05$ ** $p < 0,01$ *** $p < 0,001$ # $p < 0,0001$

Fig. 2. Correlation of headache character and migraine-associated symptoms.