

The Link Between Obesity and Migraine: Does this exist?

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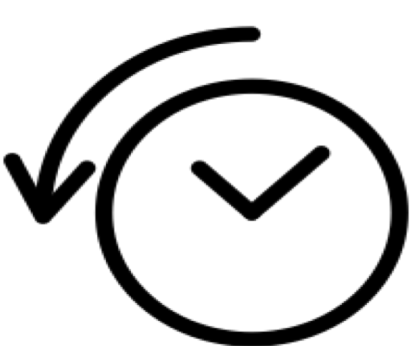
BACKGROUND

- Migraine and obesity are both prevalent disorders, resulting in a high socioeconomic burden, however, a clear association between these two remains unclear.
- Migraine headaches are thought to be of neurovascular origin, linking to the trigeminovascular pathways, which is the basis of triptan monoclonal antibody treatment.

AIM OF THIS STUDY

- To investigate the association between migraine severity, metabolic syndrome and estrogen-associated variables.

METHODS



Retrospective
review



Adult patients
with chronic
migraine



Extracted
metabolic
variables
including BMI



Extracted
migraine
variables

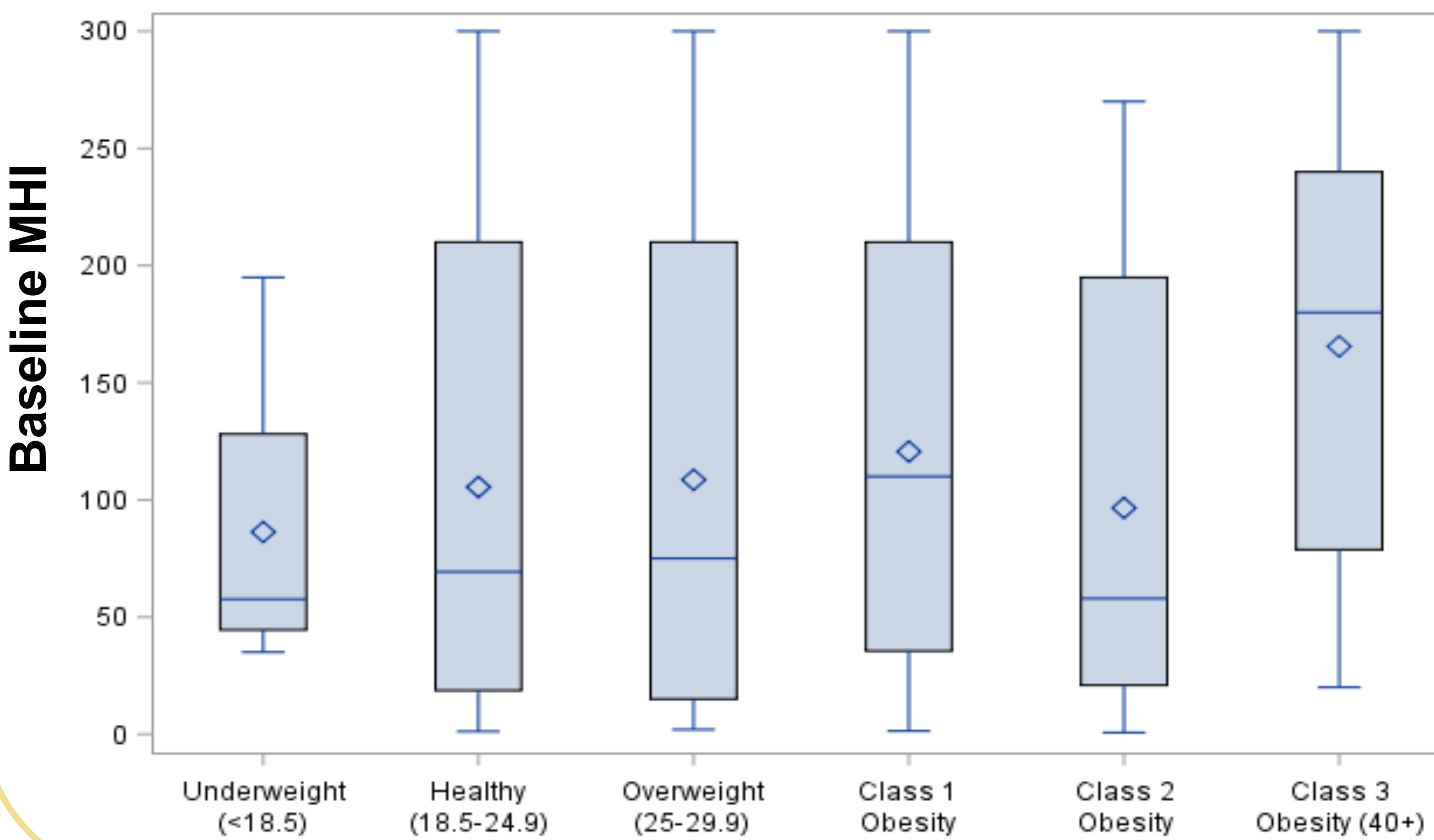
- **Migraine headache index (MHI)** was calculated by multiplying frequency, intensity and duration of headaches. MHI is considered a measure of migraine severity.

RESULTS

Demographic and Clinical Characteristics

Variable	Level	Total (n=223)
Sex	Female	173 (78%)
	Male	50 (22%)
Age at Presentation	Mean (SD)	44.4 years (12.8)
BMI	Mean (SD)	29.5 (8)
BMI Categorized	Underweight (<18.5)	4 (2%)
	Healthy (18.5-24.9)	72 (32%)
	Overweight (25-29.9)	59 (26%)
	Class 1 Obesity (30-35)	44 (20%)
	Class 2 Obesity (35-40)	20 (9%)
	Class 3 Obesity (40+)	23 (10%)
Hypertension	No	79 (35%)
	Yes	143 (64%)
Postmenopausal Status (*n=155)	No	97 (63%)
	Yes	58 (37%)
Menstrual Migraine (**n=116)	No	60 (52%)
	Yes	55 (47%)
Associated with pregnancy		1 (1%)

Distribution of MHI by BMI Class



- Class 3 obesity was correlated to increased MHI (**p = 0.01**) and number of headaches (**p = 0.007**), respectively.
- Increased number of migraines was correlated to postmenopausal status (**p = 0.02**).

CONCLUSIONS

- Patients with a BMI > 40 experienced a significantly higher number of migraines per month and had a higher MHI.
- The worsening frequency of migraines after menopause can be explained by the initial estrogen withdrawal
- Larger population studies are needed to further explore the effect of BMI on migraine severity and migraine surgery outcomes.