



Sleep quality and idiopathic intracranial hypertension

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Objectives:

The association between headache and sleep disorders is bidirectional:

headache promotes insomnia, and insomnia can trigger headache, where both share common brain structures, as thalamus, hypothalamus, and brainstem nuclei

Cerebrospinal fluid (CSF) acts as a lymphatic system for the central nervous system (CNS) removing the neurotoxic degradation products of cellular metabolism accumulating in the “awake” CNS mainly during sleep.

So, we aimed to assess the association between **sleep quality and headache related to CSF dysregulation**, particularly **idiopathic intracranial hypertension (IIH)**.

Methods:

This cross-sectional study included headache clinic adult patients in Ain Shams University hospitals, in Eastern Cairo, serving urban and rural areas, from **November 2022 till April 2023**. We excluded those with 2ry headaches or psychiatric illness.

Assessment of symptoms was done according to :

- **ICHD3**.

- **Pittsburgh Sleep Quality Index (PSQI)**

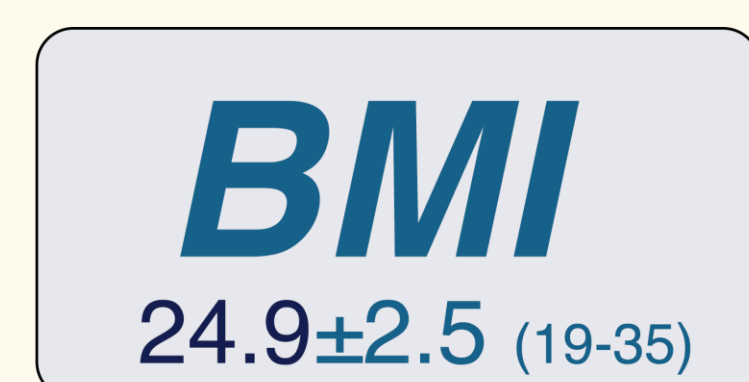
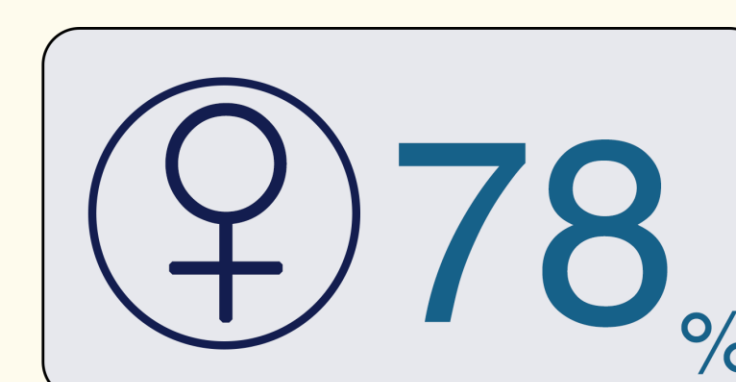
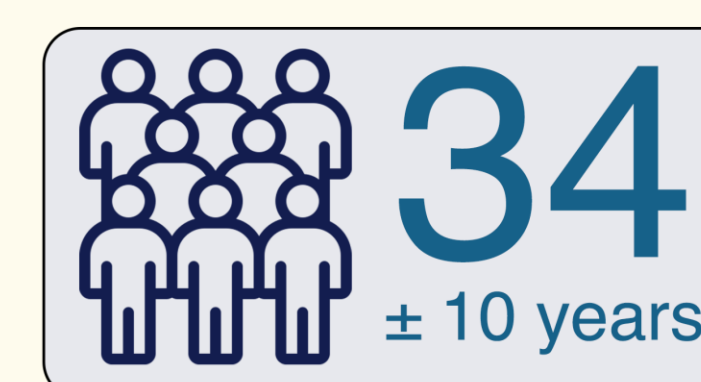
- **Seven subitem questionnaire** with score range 0 to 20 with cutoff point for poor sleep quality > 5.

All patients had brain imaging and a Lumbar puncture for those with signs of **IIH** on **MRI or papilledema on fundus examination**.

Results:

Of 168 assessed patients, 140 patients were included. The patients' mean age was 34 ± 10 years, and 78% were females, with mean BMI of 24.9 ± 2.5 (19-35).

Of **168** assessed patients, **140** patients were included.



Among the assessed patients, **49% had poor sleep quality**, being 73% among 51 IIH patients, 50% among 58 chronic migraineurs, 25% of tension headache cases, 4% among episodic migraineurs, and 0% among cluster headache cases, being statistically significant among IIH compared to other types of headaches and in chronic migraine compared to episodic ($P < 0.001$).

49% had poor sleep quality

51 IIH patients

73% reported poor sleep quality.

58 Chronic Migraine

50% reported poor sleep quality.

Tension Headache

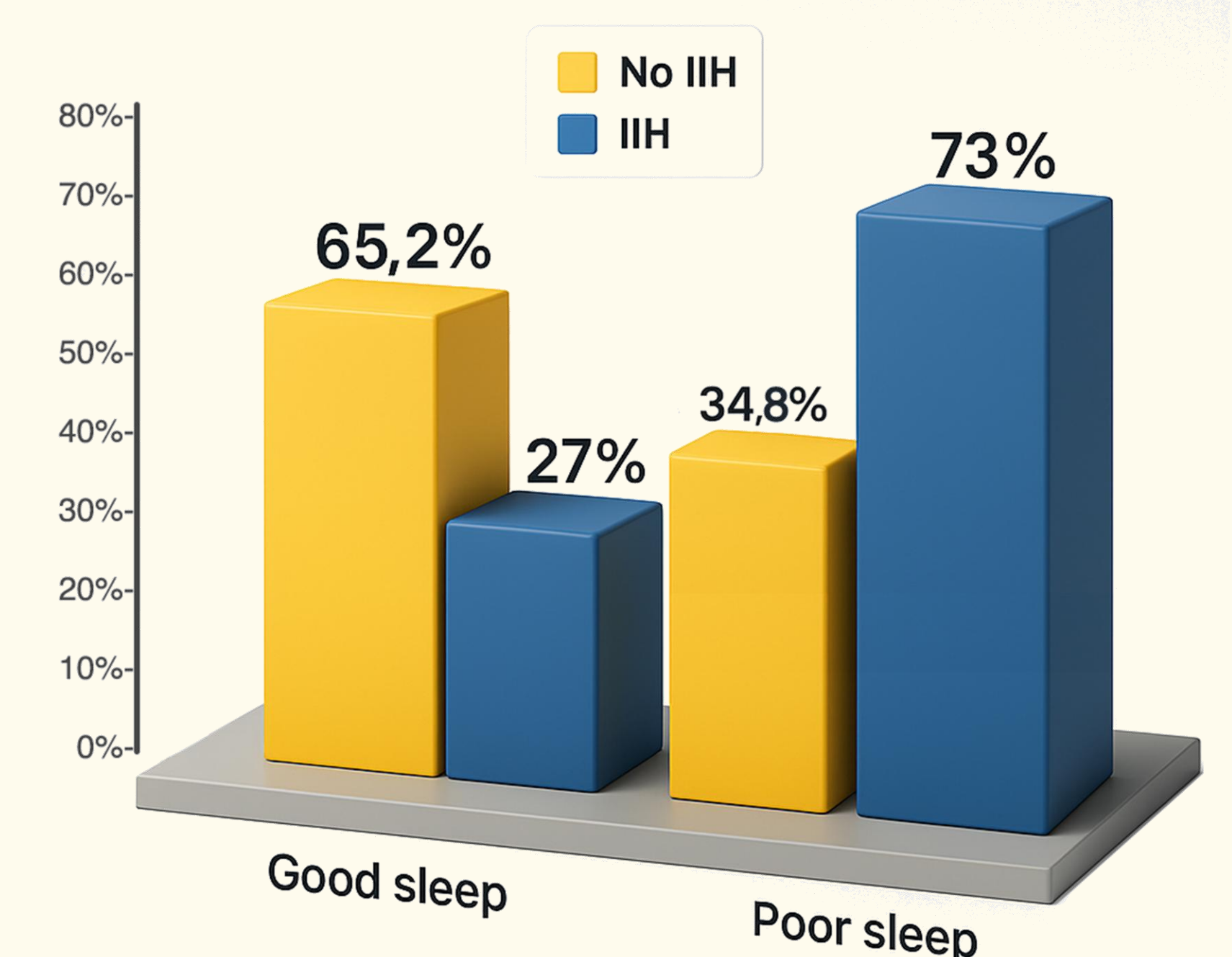
25% reported poor sleep quality.

Episodic Migraineurs

4% reported poor sleep quality.

Cluster Headache

0% reported poor sleep quality.



Conclusions:

The estimated percentage of sleep disturbance among headache patients is almost **50% being highest among IIH cases**.

This may be explained by the proposed relationship between **glymphatic system drainage** during sleep and the **pathogenesis of IIH**.

We highlight the importance of sleep quality assessment for IIH patients for its impact on quality of life and headache.