

# Proposed pharmacological management of hypnic headache

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## Introduction

Hypnic Headache, also known as "alarm clock headache", is a rare primary headache disorder and is characterized by frequently recurring headache attacks, specifically occurring during sleep and nighttime, severely impacting patients' quality of life.

## Aims

As treatment options for this headache are scarce, this study aimed to perform a critical review of the available therapeutical options and provide a proposed pharmacological recommendations.

## Methods

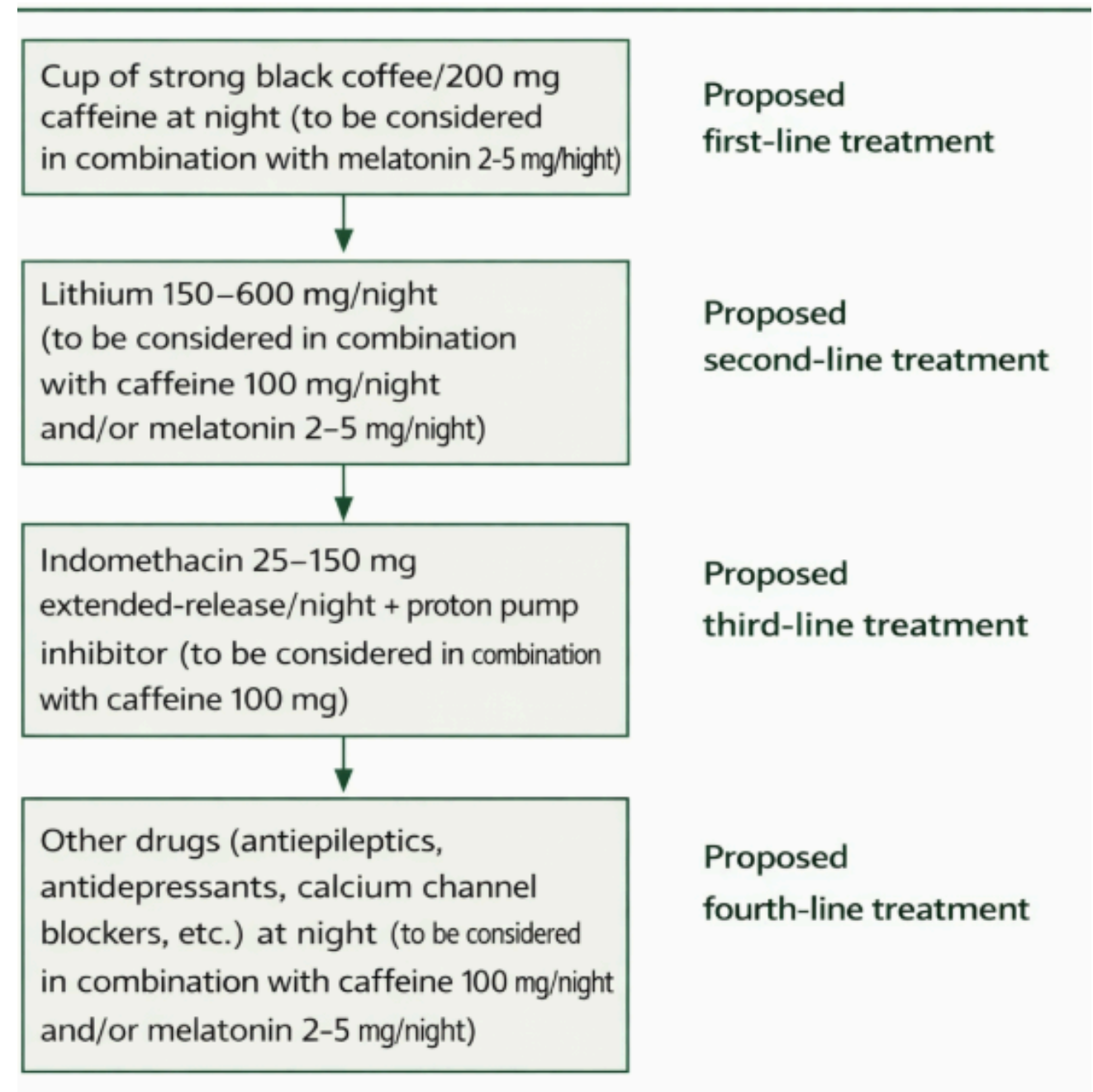
All the relevant medical literature has been reviewed for any insights regarding the alternative treatment options; in addition, experts opinions on treating head pain have been used to aid creating reliable pharmacological analgesic management proposals.

## Results

Caffeine is the most commonly used first-line therapy for both acute attacks and prevention of hypnic headache. Ingestion of strong coffee, caffeine capsules, or caffeine-containing analgesics effectively relieves nocturnal attacks in over 70% of patients. A cup of coffee before bedtime may also prevent attacks, with prophylactic efficacy exceeding 50%. Among non-caffeine options, acetylsalicylic acid shows benefit in nearly 60% of cases, while triptans, NSAIDs, opioids, and ergot derivatives are generally ineffective. For preventive therapy, lithium salts demonstrate the highest efficacy, improving symptoms in about 70% of patients, though they require careful monitoring due to frequent side effects. Indomethacin and melatonin are also effective in over half of patients and may serve as alternatives or adjuncts. Other drugs (e.g., flunarizine, verapamil, topiramate, or antidepressants) show limited benefit. Overall, caffeine, lithium, indomethacin, and melatonin remain the mainstays of both acute and preventive management.

## Conclusions

More than half of patients experience clear benefits from preventive therapy. A characteristic feature of hypnic headache is its positive response to therapeutic doses of caffeine, which remains the most effective treatment for acute nocturnal attacks. Lithium, caffeine, indomethacin, and melatonin demonstrate the highest efficacy and should be considered as key options for preventive management. The treatment proposals have been created based on our reports.

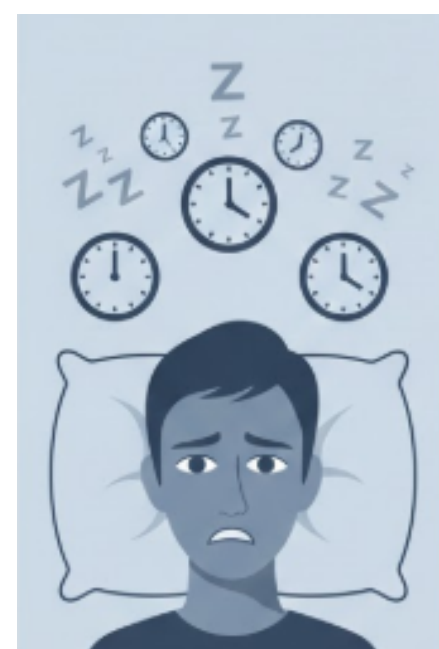


## Most effective agents in prophylactic prevention of hypnic headaches

Drug	Dosage	Efficacy
Lithium	Range between 150-600 mg at night (target serum level 0.5-1 mmol/l)	73%
Caffeine	One cup of coffee containing approx. 200 mg caffeine; Painkillers containing caffeine in doses of 100 mg	54%
Indomethacin	25-150 mg at night	51%
Melatonin	2-5 mg at night	50%

## Most effective agents in the treatment of acute hypnic headache attacks

Drug	Dosage	Efficacy
Caffeine	One cup of coffee containing approx. 200 mg caffeine	79%
Painkillers containing caffeine	100 mg caffeine	73%



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