Hydroxyzine: Rational choice for inpatients with insomnia

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We have found that hydroxyzine is effective, well tolerated, and has fewer side effects than other commonly used hypnotics

Many physicians prescribe hypnotics for hospitalized patients with insomnia. Frequently used medications include temazepam, diphenhydramine, quetiapine, and trazodone. We have found hydroxyzine, 25 mg to 100 mg nightly, to be effective in adults and geriatric patients and feel it is a more rational choice.

Temazepam and other benzodiazepines may cause behavioral disinhibition, delirium (particularly in geriatric patients), and development of tolerance,[1] which may lead to withdrawal symptoms after discharge. Diphenhydramine, quetiapine, and trazodone are effective as hypnotics through antihistaminergic mechanisms, but efficacy can be compromised by adverse effects mediated by non-histaminergic receptor activity. For example, at doses used for sleep, quetiapine can cause weight gain,[2] extrapyramidal symptoms, and orthostasis. Trazodone also causes orthostasis and, infrequently, priapism. Because of its relatively high affinity for acetylcholine receptors, diphenhydramine can cause constipation and urinary retention, worsen cognitive function, and exacerbate delirium, particularly in geriatric patients.[3]

Hydroxyzine is a more selective antihistamine than the aforementioned molecules,[4] which leads to the sleep-promoting benefits of H1-receptor blockade without significant alpha-1 adrenergic antagonism or anticholinergic side effects. The ratio of affinity for H1 receptors to cerebral acetylcholine receptors is more than 10 times greater for hydroxyzine than for diphenhydramine. Similarly, hydroxyzine has greater affinity for H1 receptors than alpha-1 adrenergic receptors, while trazodone has greater affinity for alpha-1 adrenergic receptors than for H1 receptors. Additionally, hydroxyzine does not lead to tolerance.[5] Finally, it has a potential economic advantage over on-patent drugs such as quetiapine.

A disadvantage to hydroxyzine is its comparatively long half-life of 20 hours. Although this can lead to daytime sedation after nighttime dosing, we have not found this to be clinically significant for most patients.

References

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