Case report: Unexplained syncope explained

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An elderly patient with multiple chronic diseases and nonspecific symptoms might present a diagnostic challenge, in part because of the risk of drug-drug and drug-disease interactions. We report a case of unexplained syncope of unexpected origin.

Case report

A 93-year-old woman living alone in the community was found unconscious in the bathtub. She was admitted to hospital by a cardiologist and discharged after an uneventful 24-hour stay. Two days later, she was found lying on her bedroom floor. She was taken back to the emergency department, where she was alert and able to get in and out of bed, get on and off the toilet, and walk with minimal assistance. Her heart rate varied from 48 to 60 beats a minute and cardiac rhythm was irregular. There were no focal neurologic signs. Electrocardiographic examination revealed sinus rhythm with atrial premature beats and left ventricular hypertrophy.

She was re-admitted to hospital by her family physician. Her history showed three syncopal events over a 2-year period since starting donepezil for Alzheimer's-type dementia. She had heart failure from diastolic dysfunction, mild obstructive pulmonary disease, and essential hypertension. Medications included clonidine, 0.05 mg bid; furosemide, 20 mg daily; various vitamins; and salbutamol, ipratropium, and fluticasone via metered dose inhaler.

Because clinical trials have reported a doubling of the risk of syncope in treated subjects,[1] donepezil was discontinued. The consulting cardiologist suggested a Holter monitor, which was applied several days after donepezil was stopped. During two separate 24-hour monitoring periods, a 5-second episode of supraventricular tachycardia was found, which could not explain her symptoms. Once, while home from hospital on a day pass, her caregiver noted that, while eating supper, she suddenly closed her eyes, fork in midair, and fell asleep for 45 minutes. Otherwise, while in hospital, she had episodic fatigue and mild unsteadiness, but no syncope.

She was discharged to a foster home for the elderly for fear that syncope and falls would recur. Forty-eight hours after discharge, she was again drowsy and unsteady on her feet. In the emergency department once again, a thorough reevaluation by an emergency physician, her family physician, and a consultant in geriatric medicine failed to reveal any apparent cause. The family reported that she seemed to be drowsy after taking clonidine.

Because fatigue might be associated with clonidine use, the family was asked to remove this medication from her 7-day regimen. On doing so back at the patient's foster home, one family member discovered that clonazepam, *not* clonidine, had been dispensed. The community pharmacist had dispensed a half tablet of clonazepam, 2 mg instead of a half tablet of clonidine, 0.1 mg. Subsequent investigation revealed that she had been taking clonazepam at home since the morning she was found unresponsive in the bathtub. Once the clonazepam was stopped, her condition promptly improved, with no further episodes of syncope, unsteadiness, or drowsiness.

Discussion

On several occasions, this patient was extensively investigated in hospital for presumed syncope, unsteadiness, and drowsiness with no clear explanation. In hindsight, it is apparent that she was suffering from side effects of clonazepam. Benzodiazepines are known to produce excessive sedation and gait ataxia, while increasing the risk of falls in elderly people.[2-5]

Many (eg, pharmacists[6]) believe that the risk of drug dispensing errors is increasing. An experienced medical librarian performed a literature search focusing on medication errors. MEDLINE and HealthSTAR

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English-language databases were searched from January 1985 to November 1999 for articles having various combinations of the MeSH terms "medication error," "terminology," and "pharmaceutical preparations" and for text containing the words "confusion" or "similarity" and their various suffixes. Several examples of morbidity and mortality related to confusion among drugs with similar-sounding names were found.[7]

The contribution of drug name confusion to medication error is well-known.[8] Drug-name confusion also contributes to drug-related illness in the elderly, itself a factor in 19% of hospital admissions of patients 50 and older.[9] Other factors increasing the potential for medication error might be the rapidly increasing number of new pharmaceuticals as well as the increasing workload for pharmacists.

This case exemplifies the difficulty of diagnosing drug-related illness in elderly people with cognitive impairment. The community pharmacy reported that the bottles of clonazepam and clonidine had been stored side-by-side in their store, and the pharmacist admitted the prescription had been filled twice from the wrong bottle. While the family physician had looked at the patient's medication in the daily-dose pill box, the dispensing error was not noticed, as a halved 2-mg clonazepam tablet is virtually identical (ie, same size and colour) to a halved 0.1-mg clonidine tablet. Fortunately, the error was detected by the family on removing the "clonidine" from the box and on noticing the number 2 written on the tablet.

Conclusion

Health care providers must be alert to the possibility of medication errors when elderly patients taking multiple medications present recurrently with symptoms that are difficult to explain.

Editor's key points

- An elderly patient was admitted to hospital three times for syncope. The cause of the syncope remained unexplained, despite investigations.
- This case report reminds us to review our patients' medications meticulously when they present with symptoms that are difficult to explain.

Points de repère du rédacteur

- Une patiente âgée a été admise à l'hôpital trois fois pour des syncopes dont l'origine demeurait inexpliquée malgré l'investigation.
- Cette étude de cas nous rappelle l'importance de vérifier minutieusement la médication de nos patients lorsqu'ils présentent des symptômes difficiles à expliquer.

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