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MDS Alert

Risk Management: Resident Taking These Meds? Keep This Potential Problem on Your Risk Management List

These behavioral symptoms can be an early warning sign of a serious medication problem.

The MDS and/or medication administration record may hold the key to flagging residents who could be at risk for a dangerous problem that the care team needs to catch sooner rather than too late.

Case in point: A 78-year-old resident suffered fractured ribs due to a fall. He developed a cough that aggravated his rib pain, so the weekend on-call physician ordered Mucinex DM maximum strength (dextromethorphan/ guaifenesin), reported **Thomas Lynch, PharmD,** at this year's American Medical Directors Association annual meeting. The resident was also taking an antihypertensive agent, a thiazide diuretic, Aricept for dementia, the antidepressant Sertraline (150 mg/day), and tramadol PRN for pain. On Monday, the resident had a fever, accelerated heart rate, and increased confusion.

What might be going on?

The resident has the potential for serotonin syndrome due to the fact that he's taking a higher dose of an antidepressant, in combination with the tramadol, and the dextromethorphan, Lynch cautioned. All of these drugs have serotonergic properties, which can create the life-threatening serotonin syndrome. The symptoms, according to Lynch, include:

- Agitation
- Diaphoresis
- Diarrhea
- Fever
- Hyperreflexia, incoordination, myoclonus
- Shivering and/or tremor
- Mental status changes

Serotonin syndrome can occur when a person takes any drug that increases serotonin levels, Lynch cautioned. All antidepressants except Wellbutrin can cause the syndrome, he relayed, especially when patients take combinations of different antidepressants or an individual antidepressant at a higher dose.

Other culprits include meperidine (Demerol), which Lynch noted that most hospitals are trying to eliminate. Tramadol, which is prescribed for pain, can also be a problem. "Not only is [tramadol] a weak opiate," he said, "but it has serotonin reuptake inhibitor properties ...." (For a list of drugs and herbals with serotonergic properties, see page 112.)

"You can't predict who is going to get serotonin syndrome, but people taking combinations of medications [that increase serotonin levels] are at higher risk," says **Judy Beizer, PharmD,** a professor at St. John's University in Queens, N.Y.

Differentiate Between Serotonin Syndrome and Anticholinergic Delirium

Patients taking medications with anticholinergic effects can also develop signs and symptoms that could appear to be serotonin syndrome. To tell the difference between serotonin syndrome and anticholinergic delirium, look at the patient's history and medications, advises **Richard C.W. Hall, MD, in Gainesville, Fla.** "There are over 600 medications that have anticholinergic properties, which vary in their degree of intensity. Some are more common than others -- for example, Benadryl is a common one."

The person's symptoms may also provide clues. While you may see hyperthermia and tachycardia in both conditions,

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usually someone with serotonin syndrome will display gastrointestinal hyperactivity -- for example, loose bowel movements and "rushing bowel sounds" in the abdomen, says Hall.

"By contrast, people with anticholinergic [overload] get constipated and they become very dry. The old saying you learn in medical, nursing, pharmacy school, etc., helps identify anticholinergic overload: 'Red as a beet, mad as a hatter, dry as a bone.' You tend to see increased salivation with serotonin syndrome but not anticholinergic syndrome," adds Hall.

Hold the Meds and Call the Doctor

"In most, if not all cases, where you are worried about a medication-caused syndrome**,** hold the medications you are worried about and get in touch with the doctor," advises Hall. "Most mild to moderate cases of serotonin syndrome resolve within 24 to 72 hours of stopping the medication," he says.

With more severe cases, you may have to send the patient to the emergency department, says Beizer. It depends on the facility's capability for handling that type of situation.

Keep in mind: When stopping SSRI and some other antidepressant medications you may need to worry about the patient developing serotonin discontinuation syndrome, Hall warns. You can usually avoid the syndrome by tapering the medication, but "if you're worried about serotonin syndrome, it's better to stop the medication than to taper it," says Hall. **"**If you hold Paxil or Effexor, which are notorious [for the serotonin discontinuation syndrome], you can see the syndrome within 24 to 48 hours."

Look for the serotonin discontinuation syndrome later with other antidepressants (48 to 72 hours, if at all), which is especially true for Prozac, where you may not see it develop due to Prozac's long half-life, Hall relays.

Most cases of discontinuation syndrome aren't dangerous, he says, but people experiencing it may feel like they are developing a cold or flu. In bad cases, however, people can experience "nausea, vomiting, agitation, anxiety, and feel off balance," he adds.

"There's no direct anticholinergic withdrawal like you see with serotonin agents," Hall says.

If the Resident Does Have Serotonin Syndrome, Take This Next Step

When the resident does have serotonin syndrome caused by serotonergic medications, wait for the syndrome to resolve completely and try to figure out what caused it, Hall advises. "There are cases where you can get serotonin syndrome on one medication. But if the person has been on an antidepressant for a while and develops the syndrome, something has changed," he points out. "And if you figure out what it is, you can address it and sometimes be able to put the person back on the medication, maybe at a lower dose." You have to make such decisions on a case-by-case basis, he emphasizes. For example, the person may be taking a medication that affected his ability to metabolize the serotonergic medication -- "or his liver may not be working as well" as it was before, which caused his serotonin levels to increase.

Resource: For more information on serotonin syndrome, read an article co-authored by Hall in Clinical Geriatrics at www.clinicalgeriatrics.com/article/8118.

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