Mrs. H is a 76 year-old widow who lives independently, is active in her community, and is an important support to her son who has schizophrenia. She has severe bilateral hearing loss, but is otherwise healthy and takes only vitamin D 1000 IU daily. She comes into the ER acutely paranoid, believing people are breaking into her home, hearing multiple people conversing, and hearing classical music playing. She is extremely distressed and agitated.

New onset of hallucinations, and/or psychotic symptoms, should be considered delirium-related until proven otherwise. A thorough physical examination is essential. Basic bloodwork should include CBC, electrolytes, glucose, renal function, LFTs, TSH, calcium, vitamin B12 levels, and urinalysis. Further investigations, such as CXR, ECG, and CT brain may be indicated based on history and physical exam findings. Consider polypharmacy as a possible etiology of delirium, as well as alcohol or benzodiazepine intoxication or withdrawal. Fifty percent of delirium cases have no identifiable cause. Even when you are convinced delirium has been ruled out, the differential remains broad:

- Hallucinations related to dementia (visual more common than auditory)
- Depression with psychotic features (hallucinations uncommon, delusions more likely)
- Mania with psychotic features (delusions more common)
- Primary psychotic disorder
  - Late-onset schizophrenia
  - Delusional disorder
- Secondary to severe sensory impairment
  - Charles Bonnet syndrome (visual hallucinations) / Musical hallucinosis
- Complex-Partial seizures

Treatment depends on the underlying cause. For dementia-related hallucinations, firstly, non-pharmacological interventions should be implemented, tailored to each individual case. Using a behaviour observation scale (like the Dementia Observation System), one can identify patterns of symptom worsening, thus highlighting potential triggers and ways to intervene (www.piecescanada.com).

If such interventions fail to provide optimal reduction in symptoms, and distress remains elevated, then antipsychotic treatment can be considered. Antipsychotic treatment is indicated in cases of primary psychotic disorder, and can be added to antidepressant therapy in mood disorder with psychosis. There is no firm rule when deciding which antipsychotic to use. However, risperidone is a popular choice because its side-effect profile is less anticholinergic, and less sedating.

Cont’d on page 4
At higher doses, extrapyramidal symptoms (EPS) are more likely in risperidone than with other atypical antipsychotics. Dosing should start at 0.25 mg QHS and titrated by 0.25 mg every 1-2 weeks to a maximum of 1 mg total daily dose. Using BID dosing may help reduce side effects. Watch for increased agitation, which could signal the presence of akathesia. Antipsychotics are not indicated for the treatment of hallucinosis secondary to sensory impairment.

You see Mrs. H a month later. You learn from the discharge summary that she was treated for a UTI with nitrofurantoin. Risperidone 1mg BID was started concurrently. MMSE at discharge was 29/30. She still hears music, though this has been the case for over a decade, and does not distress her. The voices are now fewer and less intense, and only present when she is idle. Paranoia has completely resolved. You notice mild masked facies and rigidity on physical exam. You believe she has musical hallucinosis secondary to severe hearing loss, and auditory hallucinations due to resolving UTI-related delirium. You are concerned about EPS and decide to taper and discontinue risperidone over the next month. Four weeks later, she reports that the voices are worse and she is moderately distressed by these. You conclude she has a late-onset primary psychotic disorder (with a positive family history) and restart risperidone at 0.25 mg qhs. She has a good response without side effects. In addition to monitoring for EPS, the patient’s weight, fasting glucose and lipids should be assessed every 6 months.

REFERENCES

FOR FAMILIES:
Delusions and Hallucinations info sheet from Alzheimer Canada

RESOURCES
First Link®, a program that gives patients with dementia and their caregivers and family a direct connection to information and services in their community.
http://www.alzheimer.ca/en/on/We-can-help/Information-and-referral/Information-for-health-care-professionals/First-Link

A Guide to Scheduling and Billing for Family Physicians (in Ontario)
www.champlaindementianetwork.org/en-resources.asp#PHYSICIANS – click on Dementia Newsletter for Physicians Vol. 1, No. 1, Fall 2010, page 1-2