Frontotemporal dementia

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1 Frontotemporal dementia should be considered in adults aged 50–75 years presenting with behavioural or language changes

After Alzheimer disease, it is the second most common cause of dementia among adults younger than 65 years.[1] Frontal and temporal lobe degeneration results in behavioural or language impairment (Appendix 1, available at www.cmaj.ca/lookup/doi/10.1503/cmaj.230407/tab-related-content).[2]

2 When frontotemporal dementia is suspected, other causes for symptoms, such as psychiatric diagnoses, should be considered

Cognitive screening with tests sensitive for executive dysfunction (e.g., Montreal Cognitive Assessment) should be used. Brain imaging, preferably magnetic resonance imaging (MRI), should be used to rule out structural brain lesions and investigate for frontotemporal atrophy. Laboratory investigations should be used to exclude treatable causes of behavioural impairment (e.g., vitamin B_{12}, thyroid-stimulating hormone). Clinicians should then refer the patient to a neurologist.

3 Functional disability occurs within 3 years of diagnosis, but is variable between patients

Patients who present initially with language symptoms develop behavioural symptoms and vice versa. Apathy can be a prominent symptom that may eventually override disinhibition. Patients succumb to late-stage complications including malnutrition, falls and aspiration pneumonia. Earlier age of onset, specific genetic variations, behavioural-variant frontotemporal dementia and concomitant motoneuron disease portend a worse prognosis.[3,4]

4 Multidisciplinary care assists in diagnosis and in addressing functional and social problems

Where available, a behavioural neurologist or neuropsychiatrist should be involved in patient care. Consultation with a clinical geneticist should be arranged if the patient has a strong family history. Given the disease's negative effects on cognition, impulsivity and judgment, advanced care planning can address safety concerns (e.g., driving) and legal matters (e.g., power of attorney).[4]

5 The course of frontotemporal dementia is not modifiable with existing treatment options

Cholinesterase inhibitors used for Alzheimer disease are not beneficial and may worsen neuropsychiatric symptoms. Antidepressants (e.g., trazodone) can reduce behavioural symptoms. Antipsychotics are indicated for patients who exhibit dangerous behaviours, but should otherwise be avoided because of adverse effects.[5] Nonpharmacological strategies for symptom control are of limited efficacy.

References

1. Sivasathiaseelan H, Marshall CR, Agustus JL, et al. Frontotemporal dementia: a clinical review. *Semin Neurol* 2019;39:251-63.
2. Logroscino G, Piccininni M, Graff C, et al. Incidence of syndromes associated with frontotemporal lobar degeneration in 9 European countries. *JAMA Neurol* 2023;80:279-86.
3. El-Wahsh S, Finger EC, Piguet O, et al. Predictors of survival in frontotemporal lobar degeneration syndromes. *J Neurol Neurosurg Psychiatry* 2021 Jan. 13 [Epub ahead of print]. doi: 10.1136/jnnp-2020-324349.
4. Karageorgiou E, Miller BL. Frontotemporal lobar degeneration: a clinical approach. *Semin Neurol* 2014;34:189-201.
5. Magrath Guimet N, Zapata-Restrepo LM, Miller BL. Advances in treatment of frontotemporal dementia. *J Neuropsychiatry Clin Neurosci* 2022;34:316-27.

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