Frontotemporal Dementia: Backgrounder

Frontotemporal dementia (FTD) is a neurodegenerative syndrome characterised by progressive deficits in behaviour, mental function, and language. Behavioural variant FTD (bvFTD) is the most common type of FTD; it is particularly aggressive and progresses faster than Alzheimer's disease.[1]

Symptoms of bvFTD usually start at around 40-60 years of age. The most obvious early symptoms are personality changes, disinhibition, and apathy. This includes socially inappropriate behaviour, impulsive actions, reckless financial decisions and even criminal behaviour.[1] Affected individuals tend to lose interest in work, hobbies and friends and may also show stereotyped behaviours, including repetitive movements, compulsive ritualistic behaviours, repetitive use of verbal phrases and binge eating.

There are currently no treatments available that can affect the progression of FTD. Instead, treatments are aimed at modifying behavioural symptoms.

FTD burden

FTD is the second most common form of dementia across all age groups after Alzheimer's disease.[1] In the United States, FTD affects 15 to 22 people per 100,000 in the population; approximately 70% of these cases are bvFTD. In addition, up to 26% of people with early-onset dementia have FTD. In Europe, estimates for FTD range from 4 to 17 people per 100,000 in the population.[2]

FTD is often misdiagnosed as a psychiatric illness, suggesting that its true prevalence may be underestimated.

The role of tau in FTD

Approximately half of bvFTD patients have a specific pathology that involves aggregation of tau protein in the brain. The other half have a pathology that involves the aggregation of a protein called TDP-43.[1]

TauRx's second-generation Tau Aggregation Inhibitor LMTX® works by undoing the tau tangles that cause dementia, thereby slowing and even arresting memory loss. Based on studies in cell models, LMTX® may also have activity as an inhibitor of aggregation of the protein TDP-43.

Because bvFTD is relatively rare, TauRx was granted Orphan Designation for LMTX® in 2010 in the EU. The company has now completed its Phase 3 clinical trial of LMTX® in this disease area and results will be reported for the first time at the 10th International Conference on Frontotemporal Dementias (ICFTD), 31 August-2 September 2016.

Only when all Phase 3 study results have been analysed and discussed with regulatory authorities will TauRx be able to decide on the further development of LMTX® as a treatment for bvFTD.

References

1. Bang J, et al. (2015) Frontotemporal dementia. Lancet 386:1672-82.
2. Onyike et al. (2013) The Epidemiology of Frontotemporal Dementia. Int Rev Psychiatry: 25(2): 130–137