




Legal issues in frontotemporal dementia: aspects still neglected in court and clinical practice

Laura Invernizzi¹ · Alessandra Marcone² · Antonella Alberici³ · Barbara Borroni^{3,4} 

Received: 9 June 2021 / Accepted: 28 August 2021
© Fondazione Società Italiana di Neurologia 2021

Frontotemporal dementia (FTD) is a neurodegenerative condition affecting between 20,000 and 30,000 individuals in the United States, with a relatively higher incidence than previously recognized, and with an equal gender representation. Mutations in *Microtubule Associated Protein Tau* (*MAPT*) and *Granulin* (*GRN*) genes, or expansion in *C9orf72* are recognized as associated to the disease [1]. The major neuropathological hallmarks are characterized by abnormal deposition of tau or TAR DNA-binding protein 43 (TDP-43) in the orbitofrontal and anterior temporal regions, causing language deficits or behavioral abnormalities. Along with language phenotypes, namely the nonfluent or agrammatic variant of primary progressive aphasia (nfvPPA) or the semantic variant of PPA (svPPA), the behavioural variant of FTD (bvFTD) represents most FTD cases and is often associated with personality changes [2]. Both clinical heterogeneity in FTD and the lack of reliable biological markers constitute the major limits to the diagnosis, which is often reached years after the disease onset, when patients eventually arrive at specialized care centers, after showing a wide range of symptoms. As one of the possible initial disease manifestations, criminal behavior is highly present, prominently among FTD patients, but also among svPPA patients, and it entails a wide range of legal violations, from moving traffic contraventions up to sexual crimes, with men showing a significant involvement in sexual abuse [3, 4].

In FTD, criminal behavior is more prevalent as compared to Alzheimer's disease (AD) or other forms of dementia, in which it is usually confined to a minority of patients, and only in advanced disease stages [4]. Conversely, the majority of reported cases of FTD sufferers committing justice violations regards those still at the onset of their disease, before a definite diagnosis, and still cognitively intact, with a retained knowledge of moral rules and social conventions. All of which therefore raises the issue of whether FTD patients could meet the criteria to be judged not guilty in a court trial by reason of mental insanity.

We have recently represented an FTD patient in court, charged for damaging vehicles parked on the public road. The illegal acts were committed at the onset of the disease. The man was detained by law enforcement and a criminal proceeding was initiated against him, which included several aggrieved parties. The defense requested psychiatric assessment of the defendant so as to determine his fitness to trial, soundness of mind, and social dangerousness.

The patient was found to be affected by a mild cognitive impairment associated with emotional blunting, with a brain structural magnetic resonance imaging and functional positron emission tomography, documenting frontal atrophy and frontal hypometabolism. Shortly later, he was diagnosed with bvFTD. The trial consultant found that the subject was of unsound mind at the time of the offence, due to FTD, that he was fit to stand trial and that he was not socially dangerous.

By virtue of the above, the trial judge acquitted him by reason of insanity.

To the best of our knowledge, this is the first FTD patient in Italy to have ever been acquitted on the grounds of an FTD diagnosis (search from database "De Jure Giuffrè").

This case has given us the opportunity to reflect on the legal issues related to FTD, and we have found that although the literature available has described criminal behavior in FTD both qualitatively and quantitatively, mainly in the United States and in Northern European countries, an

✉ Barbara Borroni
bborroni@inwind.it

¹ Italian Frontotemporal Dementia Association, AIMFT, Brescia, Italy

² NeuroRehabilitation Unit, IRCCS San Raffaele Hospital, Milan, Italy

³ Neurology Unit, ASST Spedali Civili Brescia, Brescia, Italy

⁴ Centre for Neurodegenerative Disorders, Neurology Unit, Department of Clinical and Experimental Sciences, University of Brescia, Spedali Civili 1, 25123 Brescia, Italy

extensive evaluation of the legal consequences for different criminal actions is still to be undertaken [4]. The existence of very few descriptive works as well as the lack of comprehensive studies on this issue in Italy or other countries might be accounted for by an underreporting phenomenon. This might be explained by a fear of displaying potentially shaming or embarrassing conditions, by patients, caregivers, and public health, also due to specific cultural sensitivities, thus suggesting the idea that better public awareness should be promoted [5].

Criminal behavior in FTD poses a challenge to the justice system since it is lacking informative and comprehensive indications to support legal decision-making on the part of juries and judges. Moreover, it is still an open question whether evidence on the genetic status or cerebral hypometabolism of the patient can be used as an argument in court, when the clinical picture may not itself be sufficient to draw a clear-cut conclusion.

The matter deserves more attention for several reasons: in order to protect patients and their families, but also the whole society, as well as to provide physicians and neurologists with the correct consultancy about the spectrum of possible criminal behaviors connected to FTD.

Acknowledgements The authors wish to thank the Associazione Italiana Malattia Frontotemporale, AIMFT (www.frontotemporale.it) for the invaluable support and Dr. Valentina Lella for editing the manuscript.

Declarations

Ethical approval None

Consent to participate Written informed consent was obtained from the patient and legal guardians.

Conflict of interest L.I. acted as an author of the present work and as a defense attorney. A.M., A.A., and B.B. have nothing to disclose.

References

1. Borroni B, Padovani A (2013) Dementia: a new algorithm for molecular diagnostics in FTLD. *Nat Rev Neurol* 9(5):241–242
2. Neary D, Snowden JS, Gustafson L et al (1998) Frontotemporal lobar degeneration: a consensus on clinical diagnostic criteria. *Neurology* 51(6):1546–1554
3. Diehl-Schmid J, Perneczky R, Koch J, Nedopil N, Kurz A (2013) Guilty by suspicion? Criminal behavior in frontotemporal lobar degeneration. *Cogn Behav Neurol* 26(2):73–77
4. Liljegren M, Naasan G, Temlett J et al (2015) Criminal behavior in frontotemporal dementia and Alzheimer disease. *JAMA Neurol* 72(3):295–300
5. Berryessa CM (2016) Behavioral and neural impairments of frontotemporal dementia: potential implications for criminal responsibility and sentencing. *Int J Law Psychiatry* 46:1

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.