Managing challenging behavior due to disinhibition in Frontotemporal Dementia

Disinhibition is a common symptom of Frontotemporal Dementia affecting 64% of people with the disease.

Little is known about the effective management of disinhibition but individual case reports suggest the following approaches may be helpful:

- Ignoring inappropriate behaviour where possible, redirecting or distracting if appropriate
- Antecedent – Behaviour - Consequence Technique – a method of identifying triggers or responses that exacerbate behaviour and modifying or avoiding them with the aim of lessening the behaviour.
- Behaviour modification – substituting a more socially acceptable behaviour for a negative one
- Engaging in games or previous favourite activities

There is limited evidence that SSRIs may be helpful in managing disinhibition in Frontotemporal Dementia.

Key messages

Little is known about the effective management of disinhibition but individual case reports suggest the following approaches may be helpful:

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Background

Disinhibition is a behavioural symptom commonly seen in Frontotemporal Dementia. In one study, 64% of patients with FTD exhibited disinhibition compared with 39% of patients with Alzheimer’s.\(^1\)

Are there any recommendations around managing challenging behaviour in people with poor impulse control in behavioural variant Frontotemporal dementia (bvFTD)?

There have been no systematic studies of behavioural and environmental interventions in FTD \(^3\) and little is known about the effective management of the behavioural symptoms that result from this disease\(^4\) however individual case reports suggest that some behaviours are amenable to interventions.\(^3\) It must be remembered that these are very small scale studies and the findings may not be generalisable to all individuals. Limited advice is also provided aimed at families and carers, although this doesn’t tend to provide evidence to back up recommendations it does mirror the findings in the research.

Suggested strategies

**Antecedent–behaviour–consequence model**\(^{1,2,3,6}\) - This provides a method for observing and analysing behaviours, identifying the antecedents that trigger a behaviour and the consequences that follow a behaviour which may unintentionally reinforce or exacerbate behaviours and then modifying these antecedents and consequences with the aim of lessening behaviours.

**Behaviour Modification**\(^2\) – If an individual is determined to pursue a particular activity that is unacceptable or negative (checking suspension of parked cars by rocking them, setting off alarms), this aims to moderate the behaviour by finding a more acceptable approach to that activity e.g. (a visual inspection with a mirror) that still fulfils the individuals need.

**Playing games and engaging in prior hobbies as effective substitutes for more troubling behaviours**\(^{1,2,3}\) - Reintroducing previously favoured activities or games was found in one small study to be very effective in reducing troubling behaviours, including social misconduct and disinhibition effectively substituting positive behaviours for negative ones.

**Ignoring inappropriate behaviour where possible,\(^1\) redirecting or distracting**\(^{1,2}\) - Guidance for caregivers centres around avoiding confrontation or any attempts to force the individual to stop the behaviour as this is likely to cause agitation and exacerbate symptoms.\(^4,5\) Arguing or talking logically will not help because people with bvFTD cannot control their behaviours and lack insight that these are unusual or may be upsetting to others.\(^4,5\) Instead authors suggest diverting or redirecting the behaviour and where behaviour is odd rather than dangerous simply allowing it to continue\(^4\). If other people’s reactions are a problem, they suggest providing them with a small card which says, "Please excuse my family member. He has frontotemporal dementia which affects the way he acts."\(^2,4\)
Sexually inappropriate behaviour

Screening indicates that 5-17% of dementia patients are sexually disinhibited.¹ Hypersexual behaviour is more common among patients with bvFTD than in those with AD.⁷ ¹ study suggests that this may go beyond disinhibition and may relate to increased sexual desire due to temporal lobe-limbic involvement⁷. Suggestions for non-pharmacological management found in the literature were:

- using same-sex caregivers¹,⁹
- using clothes which fasten in the back ⁹,¹⁰
- redirection⁹,¹⁰ or distraction with conversation, activities, exercise, food ¹⁰
- educating and counselling patients, family members and caregivers⁹,¹⁰
- allow privacy for masturbation or appropriate consensual activity with partner if individual is considered to have capacity to consent ⁹

The evidence base for pharmacological management is underdeveloped and based on small scale studies or individual case reports.⁸,⁹,¹⁰

Pharmacological management

Because pharmacological treatment among older adults always results in the possibility of adverse medication outcomes, nonpharmacological treatments should be the first line intervention.⁹,¹⁰ Despite the lack of rigorous clinical trials there is an emerging consensus that SSRIS may be helpful in managing some behavioural aspects of frontotemporal dementia. The British Association for Psychopharmacology ³b has granted SSRI’s a B recommendation based on level 2* evidence available. A meta analysis of studies ³c found an overall significant decrease in general behavioural symptoms when treated with SSRIs, although very few targeted disinhibition specifically.

However both were clear that that most studies are small and uncontrolled and that larger more robust studies are required to reach more definitive conclusions about treatment efficacy.

Advice from brain injury / autism literature

Behavioural dyscontrol including disinhibition and impulsivity are also a frequent problem in brain injury and may be seen alongside deficits the ability to align interpersonal, social, and sexual conduct with social and cultural norms.⁶ Approaches mirror those of FTD literature and include the use of ABC technique and social skills training, however it is not clear whether the rehabilitative nature of skills training would translate to an individual with FTD who may not be capable of or possess the insight or inclination to learn new skills.

* Evidence from small, non-replicated, randomized controlled trials, at least one controlled study without randomization or evidence from at least one other type of quasi-experimental study. See article 3b, p.3 table 1, for full details of Categories of evidence and strength of recommendation.

This refers to a large study which found that 64% of patients with FTD exhibited disinhibition compared with 39% of patients with Alzheimer’s disease.

Screening indicates that 5-17% of dementia patients are sexually disinhibited. Men tend to be more aggressively inappropriate or physical than women who tend to be more verbally suggestive.

Disinhibition is a personality change and there is no medication that is approved to treat it. Eliminating disinhibition may be an unrealistic goal since it is the manifestation of actual changes in the brain.

In general patients with dementia significantly underestimate the severity of their own disinhibition, with their care providers rating the disinhibition to be considerably more pervasive than they do. Disinhibition is often invisible to be patient but may be offensive to significant others.

**Suggested approaches:**

- Separate the disinhibited patient from situations that trigger or exacerbate offensive behaviours (ABC)
- Ignore inappropriate behaviours or comments if possible
- Deal with inappropriate behaviours firmly employing redirection or distraction as appropriate
- Consider using same gender attendants if sexually inappropriate behaviour occurs
- Establish routines that play to the patient’s strength
- Introduce activities that gain the patient’s attention
Little is known about the effective management of the behavioural symptoms that result from FTD. Suggestions are given for some of the more common FTD behaviours including disinhibition.

Describes the Antecedent Behaviour Consequence (ABC) Model: This provides a method for analysing behaviours, identifying the antecedents or consequences that trigger or reinforce behaviours and modifying these with the aim of lessening behaviours. An example that illustrates this in practice is provided.

Behaviour modification: If an individual is set on a particular activity that is disruptive, this approach attempts to substitute a less disruptive or more socially acceptable version of this activity that still meets their goal. Again, a practical example is given.

Alternatively a positive behaviour is fully substituted for a negative one. This draws upon a small study (n=6, 1995) that described patients with disinhibition and problematic social behaviours that improved when familiar activities and favourite games were reintroduced. ‘Playing games and engaging in prior hobbies were effective substitutes for more troubling behaviours’, s68. Researchers hypothesise that intact procedural memory influenced the patient abilities to substitute positive behaviours for negative ones.

This was available in abstract only as the full article is in Japanese and so it is not possible to judge how robust it may have been. Having said this, it is unlikely to be harmful if replicated.

Suggests discreetly handing out a business like card as an explanation for socially inappropriate behaviour: ‘Thank you for your patience – my loved one has an Alzheimer’s like disorder’.

Suggests redirection or distraction of the patient to another activity.
3. **Diagnosis and Management of Behavioral Issues in Frontotemporal Dementia**, Current neurology and neuroscience reports, 2012

Provides an overview of current thinking around pharmacological and non-pharmacological management of behavioural issues in FTD:

**Pharmacological management**

Despite the lack of rigorous clinical trials, the British Association for Psychopharmacology (3b below) has given a B rating for the use of SSRIs for behavioural symptoms in bvFTD, indicating good overall clinical evidence. A meta-analysis of studies using serotonergic drugs (3c below) found an overall significant decrease in behavioural symptoms as measured by the Neuropsychiatric Inventory (NPI).

Commentary: However, it must be noted that this review itself concluded that ‘most studies are small and uncontrolled’ and that ‘larger, well-controlled treatment studies are required to reach more definitive conclusions about treatment efficacy’.

P.532 gives a good overview of SSRI studies however, looking closely only 2 mention specifically targeting disinhibition; the others refer to general ‘behavioural symptoms. AChIs are not recommended. Although memantine is was well-tolerated there is no evidence that it affected cognitive and behavioural decline in FTD.

**Nonpharmacological management**

This centres around caregiver education and support and behavioural Interventions. Based on findings from other case studies, the authors suggest:

Introducing old hobbies or favourite games to minimise social misconduct or disinhibition (referring to Japanese study mentioned above)

Use of the antecedent–behaviour–consequence model to specifically identify the triggers and consequences of particular behaviours. Then implementing strategies based on these findings to minimise the worst of these behaviours by avoiding triggers or changing the consequences or way people react to the behaviours.


Table 6, p.9 SSRIs There is type II evidence that SSRIs may help some behavioural aspects of FTD, but do not improve cognition. Studies are mixed and further evidence is needed. P.9 Gives a brief outline of the findings from SSRI studies.

**3c A systematic review of neurotransmitter deficits and treatments in frontotemporal dementia**, Neurology, 2006. (abstract only)

‘Pushing a person to do something or trying to make them stop can lead to angry outbursts that are difficult to manage. Arguing or explaining is likely to make the symptoms worse, or at best, they won't remember or care that you argued. People with FTD often lack insight that their behaviours are different and problematic. Arguing with them logically typically does not work.’

‘Try to divert the person rather than force him to stop behaviour. Try to redirect problem behaviours rather than force the person to stop. If behaviour is just odd but not dangerous, consider letting the person continue. If the person’s behavioural symptoms occur in public, consider giving other people a small card which says, "Please excuse my family member. He has frontotemporal dementia which affects the way he acts."

http://memory.ucsf.edu/ftd/livingwithftd/practicaltips


Pp.18-19 - It is helpful, though often difficult, to accept rather than challenge people with behavioural symptoms. Arguing with them or talking logically will not help because they cannot control their behaviours or even see that they are unusual or upsetting to others. Instead, be as sensitive as possible and understand that it’s the illness “talking.” Frustrated caregivers can take a “timeout”—take deep breaths, count to 10, or leave the room for a few minutes.

Antidepressants called selective serotonin reuptake inhibitors are commonly prescribed to treat social disinhibition and impulsive behaviour.


The treatment of posttraumatic disinhibition often requires behavioural, environmental, and pharmacologic approaches.

Suggests the use of Applied Behavioural Analysis and treatment for disinhibited behaviours ‘this approach entails careful characterization of the disinhibited behaviours, their internal and external (environmental, interpersonal) antecedents, and their consequences (including unintended reinforcers) – the antecedent behaviour consequence technique.'
Social skills training, including individual and group interventions, also may be useful. The participation of family members and others with whom individuals with posttraumatic disinhibition interact is an essential component of effective treatment, particularly with regard to ensuring consistency of environmental and behavioural interventions.

SSRIs decrease behavioural drive and therefore are used to diminish disinhibition in other neurologic conditions, especially frontotemporal dementia.


Conclude that bvFTD is uniquely associated with hypersexuality; it is more than just cognitive impairment with frontal disinhibition but also involves alterations in sexual drive, possibly from right anterior temporal limbic involvement in this disease.

No suggestions for treatment or management were provided.


No randomized controlled trials exist for any treatment of sexual disinhibition in dementia and there are no trials comparing different pharmacological agents. Case reports and case series report a wide range of pharmacotherapies as efficacious in the treatment of inappropriate sexual behaviours in dementia. There was only one case report found of non-pharmacological strategies to manage inappropriate sexual behaviour in 1 individual.


Because pharmacological treatment among older adults always results in the possibility of adverse medication outcomes, nonpharmacological treatments should be first-line interventions.

Common suggestions for nonpharmacological treatment include using same-sex caregivers, the use of clothing that fastens in the back, redirecting behaviour, educating and counselling patients, although the authors accept that the latter 3 are more difficult due to the impairment of new learning in dementia. Advice is also provided on meeting continued sexual needs with a consenting partner (if patient is assessed as having cognitive capacity to consent) or provision of privacy for masturbation.
Pharmacological studies are dated, and limited to case reports or very small studies. A full description of medications by class, mechanism of action, and side effects is shown in Table 1, p.233.

10. The Complex Nature of Inappropriate Sexual Behaviors in Patients with Dementia: Can We Put it into a Frame? Sexuality and Disability, 2011.

Non pharmacological interventions have to be the first line choice relating to hyper sexuality’s treatment because of the possible medication effects.

Non pharmacological approaches suggested include redirecting behaviour with food, drink or conversation, educating and counselling patients, using same –sex caregivers and using clothes which fasten in the back. Distraction may be effective by substituting other activities such as walking and exercise.

Although there are limited controlled data for the treatment of ISB in dementia, available data suggest efficacy for some commonly used pharmacotherapeutic agents. The majority of evidence on treatment of ISB comes from case reports.

Methodology

Sources searched

Healthcare databases: AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE

Search terms:

("behavioural dyscontrol" OR "behavioral dyscontrol" OR "disinhibit*" OR "poor impulse control" OR "lack of inhibition") AND ("frontotemporal dementia*" OR "brain injur*" OR autis*)

Duplicate filtered, date range 2005 -2015

Structured public domain search for caregiver advice

For further information

Please contact:

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