Dementia friendly dentistry for the periodontal patient. Part 1: recognising and assessing patients with dementia

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Key points

- Summarises the causes and prevalence of dementia.
- Provides information to aid the recognition of dementia in dental practice.
- Provides information about the medications used in the management of dementia and their relevance to periodontal care.
- Gives communication strategies to engender patient and carer cooperation with periodontal care.

Abstract

This is the first of two articles that provide a guide for the clinical management for people with dementia who present with periodontal disease in dental practice. Conditions that cause dementia and their increasing prevalence are described. Advice is given to aid the dental team in recognising patients with dementia. The impact that dementia and the medications used in its medical management have on the oral environment are also covered. The complexities of completing an accurate periodontal assessment for those with dementia are discussed and indications for best practice provided. Although both articles (Part 1 and Part 2) centre on periodontal care, much of the content is equally applicable to wider general dental care for the dementia patient.

Introduction

Dementia is the term used to describe a group of conditions that gradually destroy cognitive ability, and with it the ability to function independently and interact socially. Many reversible and irreversible conditions cause dementia[1,2,3] (Tables 1 & 2). Alzheimer's disease (AD) accounts for 50–75% of all dementia cases, with vascular dementia and dementia with Lewy bodies accounting for a further 20% and 10–15% of cases, respectively. Frontotemporal dementia accounts for less than 5% of all cases.[4] Most forms of dementia are life-limiting, incurable, and impact negatively on the individuals affected, their carers and loved ones.

There are currently over 850,000 people in the UK living with dementia, by 2051 this figure is set to rise to over 2 million.[5] The chance of developing dementia rises exponentially beyond the age of 65 years; affecting 1.7% of 65 to 69-year-olds and 40% of those over 94 years old.[6] There is also a greater prevalence of moderate and severe periodontitis among elderly populations.[7] It has long been speculated that those with dementia have increased prevalence of periodontitis due in part to impaired self-care abilities. Current evidence supports the coexistence of dementia and periodontitis.[5,8,9] Periodontitis has been found to have a detrimental impact on AD patients' quality of life.[10] A systematic review of oral hygiene and health of older adults with dementia has similarly found that plaque levels were consistently higher for those with dementia compared to those without.[9] The importance of providing periodontal treatment for those with AD has been emphasised by studies that indicate a potential connection between worsening oral health and AD progression.[11] In a small, well conducted study, the presence of periodontitis has been associated with more rapid rates of cognitive

Table 1 Conditions responsible for causing reversible (treatable) dementia[1,2]

	Condition
D	Drugs [for example, Korsakoff's syndrome due to excessive alcohol especially when associated with poor diet and thiamine deficiency]
E	Emotions [for example, depression, anxiety]
M	Metabolic [for example, pernicious anaemia]
E	Endocrine [for example, hypo & hyperthyroidism]
N	Nutritional deficiency [for example, folic acid, thiamine, vitamin B_{12}]
T	Tumours & trauma of the brain [for example, concussion, contusion, subdural haematoma]
I	Infections [for example, tuberculosis, syphilis, human immunodeficiency virus]
A	Arteriosclerosis of cerebral vessels [for example, transient ischaemic attack]

Exemplars have been provided in square brackets

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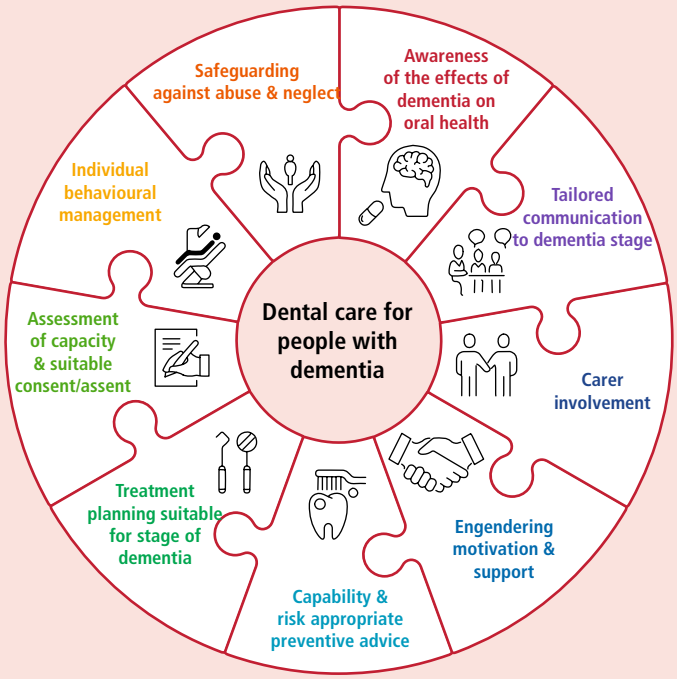
Table 2 Conditions responsible for causing irreversible (degenerative) dementia[2,3]

	Condition
P	Parkinson's disease
H	Huntington's disease
A	Alzheimer's disease. It can be in the familial early onset form or more commonly the sporadic late onset form
N	Neural infection with prions [for example, Creutzfeld Jacob Disease], viruses [for example, AIDS] or bacteria [for example, tertiary syphilis, especially when combined with HIV]
T	Traumatic vascular damage, vascular disease and stroke
O	Other cerebral cellular damage [for example, Lewy body disease, Fronto-temporal dementia and Pick's disease, Intra-cerebral pressure]
M	Malignancy [for example, brain tumours]

Mnemonic formulated using information in cited source. Exemplars have been provided in square brackets.

Fig. 1 Components of dental care for people living with dementia



decline in those with AD, compared to those without periodontitis.[12] The potential role of periodontitis in the pathogenesis of Alzheimer's disease has been discussed in detail[13,14,15,16,17] yet the role and extent to which periodontitis affects the causation and deterioration of Alzheimer's disease remains uncertain. The potential bidirectional pathogenicity between periodontitis and Alzheimer's disease is likely to negatively impact upon the likelihood of reaching periodontal stability. Furthermore, the adverse effect that cognitive decline has on oral hygiene is unquestionable and a limiting factor in reaching periodontal stability.

Despite the apparent need for quality periodontal care for those with dementia, numerous authors have found that people with dementia are less likely to seek dental care.[2,9,18] A cohort study of 158 patients with varying severities of AD, found 87% had periodontal probing depths of 4 mm and greater, there was plaque at an average of 71% of tooth surfaces, and rather alarmingly nearly 40% of periodontally involved teeth had advanced tooth mobility.[10] Addressing the unmet periodontal and dental treatment needs of people with dementia will require a combined approach between dental teams, carers, care coordinators, medical teams and clinical networks to improve the provision of dental services for those with dementia.

People with dementia can present in challenging and unusual ways to the dental team. Regardless of our patients' circumstances, cognitive abilities or demeanour, as clinicians it is our duty to provide functional dentistry to all, without bias or prejudice. There are several components that need to be appreciated to enable quality dental and periodontal care for those affected by dementia, these are represented in Figure 1, and discussed in more detail in the following sections. Barriers to the provision of quality dentistry for the dementia patient are often associated with limitations on available clinical time and a lack of understanding of the best way to manage those who have dementia in the dental environment. This article aims to provide a guide to aid understanding and management of those with dementia who present with periodontitis in dental practice.

Recognising dementia in dental practice

One-third of those affected by dementia in the UK live in care homes, of the 538,000 affected individuals who do not, many of them will receive dental care in general dental practice. Being resident in a care home does not exclude patients from general dental practice, however, the logistical support that is required means that this is only practical for a proportion of patients in care homes. Over 50% of those living with dementia in the UK remain undiagnosed.[19] As many people are living with undiagnosed dementia, members of the dental team may be among the first healthcare professionals to notice symptoms, particularly where they have been involved in the patient's care for several years preceding their cognitive decline. Early recognition of dementia is critical to enable suitable dental planning, to reduce the likelihood of future morbidity and minimise the risk of crisis management as the severity of dementia increases.

Common signs and symptoms of dementia are listed in Table 3, each of these must be considered relative to the patient's previous level of ability. It is therefore useful to know the patient's previous educational attainment, occupation, and drug use, as these factors also impact on cognitive abilities. Elderly patients who become uncharacteristically aggressive, abrupt or irritated may be suffering from early dementia. Although dementia can occur suddenly following a traumatic head injury or stroke, in most cases it has a gradual onset. In general, there is memory loss and symptoms from at least one other cognitive domain which are severe enough to impact on activities of daily living.[20]

When taking a medical history, it is worth asking all patients: 'Did a direct blood relative suffer from dementia before the age of 65 years?' This is because 5% of those who have dementia in the UK developed symptoms before their sixty-fifth birthday,[6] this is commonly due to familial forms of AD, inferring a strong risk that the patient will also develop dementia relatively early in life.

As dementia affects more than 7% of people over the age of 65 years,[6] when taking an elderly patient's medical history, it is worth asking:

- 'Is your memory as good as it used to be?'
- 'Have you ever been diagnosed with memory loss?' If yes, 'Did you recover from this?'
- 'Do you need extra help at home?' If so, 'What type?' and 'How often?'

Taking a medical history from someone with moderate dementia is fraught with difficulties, as they may not remember they have dementia, other medical conditions or take medications. Patients without dementia may not be able to recall the name of a medication but dementia patients may have completely forgotten they take a drug or have had a medical consultation. Even medical histories taken from those with mild dementia may have considerable omissions. It is possible, yet unlikely, that a patient who is not already known to the practice would present alone as a new patient beyond the early symptoms of dementia. If dementia is suspected, yet not elicited from the medical history, before proceeding with treatment it is advisable to contact the patient's GP (given the patient's consent to do so) to clarify whether there is anything in the patient's medical history that could have dental implications.

Dentists who are familiar with dementia symptoms and basic screening tools are in the prime position to screen for possible dementia. While dentists do not diagnose dementia, they are able to refer patients to medical colleagues if they believe cognitive impairment is likely. This proactive approach will also aid appropriate dental treatment planning and care delivery. Following appropriate consent, it is wise to communicate with the patient's GP to relay the information gathered and any concerns you or the patient have in relation to their cognitive function. Requesting information regarding the patient's dementia diagnosis, stage, prognosis and drug regimen is also worthwhile.

There are a variety of relatively short tests formulated to screen for cognitive impairment in primary care settings which have similar accuracy.[21] The most frequently used tests screen for dementia and classify its severity in a valid, reliable and rapid manner. Test Your Memory (TYM)[22] is one such test which is suitable for use in general practice settings. The questionnaire can be downloaded[23] and completed in around ten minutes. Ten cognitive tasks are combined on one sheet of paper, answers can be scored rapidly on a 0–50 scale. Scores of 30 or less indicate that dementia is likely. With a sensitivity of 73% and specificity of 88%, the TYM test is better at detecting true negatives than true positives.[22] Although screening for possible dementia is not a requirement, GDPs who have a particular interest in this area, may find the TYM test is an achievable option. On completion of the test it is important to feedback the findings to the patient, and for those who score 30 or less, a medical assessment to explore their memory and thought processes is advisable.

A clinical diagnosis of dementia is made by a medical practitioner, normally following consideration of the history taken from the patient and a carer, friend or relative, and performance in cognitive tests over time. A diagnosis of AD, the most common cause of dementia, is made by the exclusion of other conditions that can be responsible for causing dementia (Tables 1 and 2). Differentiation between the various subtypes of dementia is possible using a neurologic and psychiatric assessment, suitable blood tests (to exclude causes such as vitamin deficiencies and hypothyroidism), and structural imaging (capable of visualising atrophic changes in the hippocampus and other brain structures). Single photon emission computerised tomography (SPECT) and positron emission tomography (PET), are capable of distinguishing between the common causes of irreversible dementia.[24] However, the definitive diagnosis is normally only possible at post mortem autopsy.

Table 3 Signs & symptoms of dementia

Domain	Signs & symptoms
Memory loss	Inability to recall recent events for example, previous appointments, holidays, important news. Normally memory loss is noticed by someone else (Forgetting shopping lists, appointments and telephone numbers are not necessarily a sign).
Reduced attention & orientation	Lack of orientation in time and place Unable to spell a common 5 letter word backwards Reduced ability to focus on things that are of interest
Language impairment	Anomia or inability to find the correct word Impaired understanding. Speech and writing difficult to understand Inability to repeat a sentence or word
Visuospatial impairment	Inability to copy complex shapes Difficulty identifying faces that are well known to the patient Forgetting how to get back home. Hallucinations
Apraxia	Inability to execute motor responses despite intact motor functions Difficulty performing a lifelong hobby
Impaired executive function	Impaired judgement & difficulty making decisions Difficulty managing finances Forgetting steps when preparing a meal or using a household appliance Putting things in unusual places for example, toothbrush in the fridge
Altered behaviour & social interaction	Disinhibition, mood swings, aggression, suspicious, fearful Lack of motivation for activities that were previously enjoyed Uncharacteristically passive or irritable. Paranoia possible Depression, anxiety, long periods in front of the television
Altered sensory perception	Reduced sense of smell, altered taste & lack of interest in eating without physical cause

Determining the severity of dementia

For the irreversible forms of dementia, the debilitation caused by the condition is progressive: advancing deterioration will affect the patient's competence in oral hygiene, capacity to consent, and ability to cooperate with periodontal treatment. Determining the clinical stage and severity of dementia is necessary to enable appropriate dental and periodontal treatment planning. There are two commonly used clinical staging scales for dementia: the clinical dementia rating (CDR) classification[25] and the global deterioration scale (GDS).[26] The CDR and GDS scales use

slightly different terminology. As both are commonly used, patients will be best served if their dentists are conversant on both scales which are compared in Table 4.

The CDR grading can be completed in a relatively quick manner by taking a thorough history from the patient and their carer. The distinction between cognitive impairment and dementia is obscured on the CDR scale, this is because making an accurate diagnosis in the early stages of dementia can be a very real challenge and for this reason mild cognitive decline (MCI) and mild dementia are grouped as questionable. Not everyone who has subjective cognitive impairment (SCI) or MCI will go on to develop dementia. SCI has been found to increase the risk of developing dementia by over four-fold over the following seven years,[27] and MCI has similarly been linked with an increased propensity of developing dementia. The GDS[28] is preferable for dental treatment planning as it provides more detailed and specific information about the patient's ability to function, which is relevant to periodontal and wider dental treatment planning. Importantly, the GDS scale also makes a clear distinction between cognitive impairment and mild dementia, this is important, because where the dementia is due to one of the conditions listed in Table 2, symptoms will deteriorate. Mild dementia often provides a window of cooperation to enable dental treatment to lower the chance of dental morbidity as the patient deteriorates into severe dementia. In mild dementia most patients will also be able to consent for care themselves and it is the optimal time to begin to include carer involvement in dental care.

Table 4 Comparison of terminology used to grade the clinical severity of dementia[26,27,28]

	GDS stage & terminology	CDR stage & terminology
Normal adult	1: Normal cognitive decline	0: No cognitive impairment
	2: Subjective cognitive decline	
	3: Mild cognitive decline	0.5: Questionable cognitive impairment
Dementia	4: Mild dementia	
	5: Moderate dementia	1: Mild dementia
	6: Moderately severe dementia	2: Moderate dementia
		3: Severe dementia
	7: Severe dementia	

Medications used to treat dementia and their implications for dental management

Although there is no curative treatment for the forms of dementia listed in Table 2, there are two types of drugs prescribed which provide limited symptomatic relief for those with dementia. For a number of patients they provide a temporary improvement in cognition, delay deterioration and improve behavioural symptoms. They either act on the acetylcholine or glutamate producing neurons. Early in the AD disease process there is a loss of the neurotransmitter acetylcholine due to the dysfunction of cholinergic neurons which can affect memory formation. Acetylcholinesterase inhibitors (ACEIs) (donepezil, galantamine and rivastigmine) are commonly used as treatments for mild to moderate AD, as they potentiate the effect of acetylcholine, by preventing its breakdown. The NmethylD-aspartate (NMDA) antagonist memantine has also been approved for use in the management of moderate or severe AD, and for those who cannot tolerate acetylcholinesterase inhibitors. Glutamate is an excitatory neurotransmitter which binds to the NMDA receptor. Over excitation of this receptor causes an increase in intracellular calcium ions which leads to excitotoxicity. The drug memantine binds to the NMDA receptor to inhibit the prolonged influx of calcium ions to stop the toxic effect of over-excitation. The effects of these drugs on cognitive scores tend to be small, not everyone is responsive to them and around 30% of people cannot tolerate them due to adverse side effects.[29] Some patients may also take vitamin E supplements as the results of a single study have demonstrated reduced rates of cognitive decline for those who took vitamin E compared to placebo, yet further research is required to determine whether this finding can be replicated.[30]

The side effects of ACEIs that occur in a dose-related manner include nausea, vomiting, headaches, abdominal pain, and adverse cardiac effects. While most ACEIs are taken orally, rivastigmine can also be administered by transdermal application, which is less likely to cause side-effects. Less commonly, galantamine may cause taste-disturbance and rivastigmine is associated with theoretical increased salivation.[31] There are few interactions of ACEIs and drugs prescribed by dentists, although erythromycin and ketoconazole can increase the plasma concentration of galantamine[31] to potentiate its side-effects. A rare side-effect of the NMDA antagonist, memantine is Stevens-Johnson syndrome, which if occurs, could present as blisters affecting the skin and mucous membranes including the oral mucosa and lips.

In practice ACEIs are commonly associated with reduced salivary flow. Drug induced oral dryness was found in 70.5% of those with dementia, yet only 36.5% of controls, and was highly correlated with memantine consumption, even after adjustment for potential confounders.[32] Hyposalivation is recognised to negatively impact on plaque control and increase the likelihood of gingival inflammation.[33] Due to diminished oral hygiene, dementia patients are already at greater risk of root caries, as a result of clinical attachment loss or gingival recession; this risk is further increased for those who are taking anticholinesterases and memantine.

Antipsychotics (for example, risperidone, olanzapine and haloperidol), mood stabilisers (for example, carbamazepine), antidepressants and anxiolytics may also be prescribed to control the associated behavioural and psychiatric effects of dementia, all of which are similarly associated with reduced levels of saliva. A possible side-effect of long term carbamazepine or haloperidol use is leukopenia,[34] which could adversely affect the host response to periodontal pathogens. Selective 5-hydroxytryptamine reuptake inhibitors (for example, sertraline or citalopram) tend to be the medications of choice for the treatment of depression in those with dementia as tricyclic antidepressants and monoamine oxidase inhibitors can increase confusion. The anti-hypertensives and proton pump inhibitors used in the management of vascular dementia are also associated with reduced salivary flow. Reduced salivary flow as the result of reduced drug clearance rates, polypharmacy and inadequate hydration is also

recognised among the elderly. Non-nutritious use of food to manage behaviours and medications can further increase caries risk.[35]

Other side effects of medications used to treat dementia and the polypharmacy common among the elderly are gingival overgrowth, glossitis, taste disturbance and loss of taste, mucositis and candidiasis.

Importance of carer involvement

From first diagnosis of dementia it is advisable that a significant other person becomes involved in the patient's dental care, where the patient consents to this. Carers can help patients to feel at ease in the dental clinic, which can aid communication, decision making and behavioural management. Their roles will increase as the dementia progresses, and include:

- Providing familiarity in the dental environment particularly for patients who have changed practice or dentist
- Enabling an accurate medical history to be taken
- Supporting the patient, by asking questions relevant to their care, that the patient may not be able to articulate themselves and reminding the patient of what was said and done during appointments, should they have questions once leaving
- Providing continuity from appointment to appointment, should the patient forget details of their treatment
- Assisting the patient in remembering their dental appointments
- Supporting the patient in the journey to the dentist
- Providing reminders of when to brush and reinforcing brushing technique on a twice daily basis, until such time as the patient deteriorates to the extent that the carer will need to provide all oral hygiene for the patient.

It is essential to communicate how important the carer is to the patient's dental care. As the patient deteriorates, they will have increased need for carer involvement with many of the activities of daily living, of which dental care is only one aspect. This is recognised as a source of stress for carers and loved ones, who may be grieving the loss of the person they used to know before the onset of dementia. Given the seeming enormity of this situation, dental care can sometimes feel rather insignificant for carers, so it is important that they are treated with empathy and valued by the dental team.[36]

Table 5 VERA framework to aid communication with people who have dementia[37]

	Approach to communication
V	Validate the person Acknowledge that the person is trying to communicate. Avoid criticising and include the patient in all conversations with carers and third parties
E	Emotional context Try to appreciate this even when communication is unclear for example, 'You sound frustrated' Validate the person's feelings
R	Reassurance Use verbal and non-verbal communication
A	Activity To discover more about the persons concerns and address their unmet needs

The dental team should be aware of the carers' relationship with the patient and whether they hold lasting power of attorney.

Engendering cooperation for periodontal care

Those with dementia are less likely to seek dental care. This is likely to be due to a number of reasons including practical difficulties in attending appointments, and the perceived attitudes and abilities of the dental team in coping with patients who have dementia.[2,36] It is necessary to dispel patients' and carers' attitudes regarding the limitations of the dental team in coping with the symptoms of dementia by providing an environment where patients and carers feel comfortable. As for all patients, it is essential for the patient and carer to appreciate why dental treatment is necessary and the benefits of it in reducing future dental morbidity.

Timing of dental appointments is important as the patient may be more agitated or confused at certain times of the day, and some days may be worse than others. Appointments should be scheduled at the time of day that best suits the patient. Many patients tend to function better in the morning and can become increasingly tired and irritable in the afternoon, this can diminish their ability to comply with dental treatment. Cooperation is likely to be variable and not an indication that the patient will permanently be non-compliant. Liaison with carers can elicit whether it will be worth trying again on an alternative day or time.[2] Long appointments are best avoided and, for patients with moderate dementia, are best kept to under an hour. Continuity of care is important for those with dementia, this means that for people who have been regular dental attenders throughout their lifetime the best environment for treatment is often general dental practice.

Mood swings are commonplace for many patients with dementia; while they are a function of dementia rather than dental treatment, the dental team need to be aware of approaches to manage them.[2] When conversing with those who have moderate-severe dementia it can be useful to use the VERA framework[37] outlined in Table 5. The framework provides a structure to ease the patient, interpret communication and respond appropriately. It can be completed in sequence but is more of a tool kit that can be used continually during the appointment. For some, the dental environment will be familiar and comfortable, for others it can be daunting and stressful. It is particularly important that dementia patients are helped to feel comfortable in dental surroundings as stress will further diminish understanding and cooperation with treatment.

In moderate dementia, the patient is likely to need constant reassurance and repetition of information. As dementia severity advances, the dental team will need to respond appropriately to increasingly agitated and confused questions and concerns. If the patient becomes distressed, where the cause of the distress is unknown, or cannot be addressed, distraction techniques can be useful. This can be of a conversational or practical nature, for example, oral hygiene demonstration. If the patient becomes confused, repetition of short simple instructions can help, especially when delivered in a reassuring tone with a smile, without shouting or becoming irritated. Short and simple phrases are more easily understood, for example, 'open your mouth' is better than 'please let me see inside your mouth'. Where repetition is needed, it is best to repeat the phrase or question in the same manner, as rephrasing it is likely to add to the patient's confusion. It is the quality of communication in the moment that is important for dementia patients, thus behaviours and emotions should not be dismissed merely as symptoms of the dementia.

Table 6 Behavioural changes in the patient with severe dementia which may be indicative of oral pain[2]

	Behavioural sign
R	Restlessness, aggression and refusal to cooperate
E	Exacerbated drooling
S	Sleep disturbances
P	Pulling at the face
E	Eating habits altered and refusal to eat
C	Communication changes, with increased moaning and shouting
T	Tolerance of dentures diminished for those who previously wore well-fitting dentures

Mnemonic formulated using information in cited source

Many patients with dementia will have a dementia passport, this is a document designed to provide information to help professionals involved in the patient's care. It includes allergies, medications, assistance needed, means of relaxation, home and family life, comforters, life history, hobbies and interests. Each person with dementia is unique, they will have different interests and react in different ways to the same set of circumstances as dictated by their personality and past experiences. For example, some patients may feel happy and reassured when listening to music from the 1930s, others will find that depressing. Knowing what the patient likes and dislikes can help put them at ease, should they become agitated or more confused during dental treatment. If the patient does not have a dementia passport, a simple version can be downloaded and the patient, their carers, friends and family encouraged to complete it.[38]

Those with dementia are likely to need additional reminders to help them attend dental appointments. It is wise to find out which form of reminder will be best for the patient and use that format. If the patient is not used to using a mobile phone or computer, text messages and emails will be useless. For others who use electronic calendars they may be the most useful form of memory aid. With the patients consent it will also be useful to send appointment information to their carer.

Clinical assessment

Oral health and dementia care pathways have been published by the National Institute of Care Excellence; integration of the two pathways remains a future aspiration.[39,40,41] There are two crucial points in the dementia patients care pathway when an oral health assessment is advisable. The first is shortly after the diagnosis and the second is shortly after entering a care home.[2] The aim of these assessments is to gather enough information to enable appropriate treatment planning to reduce the risk of future dental morbidity. In severe dementia, pain and infection of dental origin can adversely affect patients' behaviour and quality of life, this is likely to be compounded by the fact that the patient will most likely be unable to recognise and communicate their symptoms or cooperate with dental treatment, potentially necessitating future crisis management.

A complete assessment of oral soft and hard tissues is essential to diagnose all forms of dental disease including caries, failed restorations, unrestorable teeth and teeth with a high likelihood of endodontic infection. The durability of fixed and removable prostheses and health of peri-implant tissues will also be assessed. The Basic Periodontal Examination (BPE)[42] should be used to screen for periodontal disease in all patients with dementia. The periodontal assessment should be completed in the same manner as for all patients in accordance with British Society of Periodontology guidelines,[42,43] yet for those patients with moderate and severe dementia, this may not be possible in a single appointment due to the patient's limited ability to cooperate. For patients with periodontal pockets >4mm radiographic images that show circumferential bone levels and periapical tissues will be required for each tooth affected. For the patient who requires an image of each tooth, an orthopantomograph (OPT) may be preferable to full mouth periapical radiographs, as when the patient can remain still for the longer exposure time, this requires less compliance than multiple periapical radiographs.

As there is a high incidence of xerostomia among those with dementia, it is worth assessing intraoral dryness using the Challacombe Oral Dryness Scale.[44] This information can be used to tailor the risk of the patient suffering further dental disease, such as root caries and candidiasis.

When in the severe stages of dementia, the patient will be unlikely to recognise and vocalise dental pain. For those who have severe dementia, if there is no other recognisable cause, a sudden deterioration of behaviour may indicate the patient is experiencing oral pain.[2] As there can be other causes of altered behaviour, all relevant information should be gathered from the patient's regular care team. The signs that are often indicative of dental pain are listed in Table 6. Where the patient is suffering from dental pain sedation may be required to enable oral assessment, as this is complicated by consent and co-morbidity issues it is beyond the scope of general practice and discussed to a greater extent in Part 2 of this series.

Conclusion

As many people are living with undiagnosed dementia, recognising dementia is crucial in dental practice, because of the associated implications for dental and periodontal care. Furthermore, the medications commonly used to manage dementia patients have numerous oral effects. Knowledge and understanding of the patient's cognitive condition can aid communication and help engender support for the dental care of vulnerable dementia patients who often have unmet dental needs. Dental assessment is an important aspect of the holistic healthcare for those with dementia.

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