

Smoking cessation and the older patient

The elderly smoker can suffer numerous diseases as a result of long-term tobacco use but evidence demonstrates that smoking cessation is beneficial. Self-help material, counselling, group therapy and medications are all useful, although the elderly can present unique challenges and require special considerations. Clinician encouragement and support remain important.

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Smoking is the leading cause of preventable death globally and, in the UK, it remains one of the biggest public health issues. In 2005, 24% of adults aged 16 or over in Great Britain smoked cigarettes. Although smoking continues to be more common among adults aged 20 to 34 than among other age groups, 14% of those aged 60 and over were smokers in 2005.¹

Smoking is estimated to be responsible for approximately 114,000 deaths in the UK per year. The list of smoking related conditions is extensive with the three biggest causes of smoking-related deaths being cancers, cardiovascular disease and chronic pulmonary conditions such as chronic obstructive pulmonary disease. Such conditions are also a significant cause of morbidity. There is also increasing evidence of the effects of smoking in accelerating cerebral atrophy² and increasing the risk of Alzheimer's disease and possibly other dementias, as well as its role in peptic ulcer disease, cataracts, poor wound healing, low bone density and hip

fractures.³ An additional factor concerning elderly smokers is the occurrence of burns, accidents and pharmacological interactions.⁴ The disease burden is huge, both for the individual and also for the state. Treating disease directly caused by smoking has been estimated to cost more than £5 billion a year in the UK.

In 2005 just over two-thirds of cigarette smokers in Great Britain said that they wanted to give up, but 56% reported it would be difficult to go without smoking for a whole day.¹ A key message from the National Institute for Health and Clinical Excellence (NICE) is that all smokers should be advised to stop smoking and should be offered support to do so.⁵ However, many smoking cessation programmes tend to be aimed at younger age groups. Studies have demonstrated that longevity can be improved even in older people by stopping smoking. A systematic review found that smoking cessation is associated with a substantial reduction in the risk of all-cause

mortality among patients with heart disease; this risk reduction was consistent, regardless of age or gender.⁶

For other causes of morbidity such as pulmonary disease, the benefits of stopping smoking may take up to five years to appear. There are also suggestions that ex-smokers may move reasonably quickly towards the state of non-smokers for bone density and muscle strength.⁷ For example, one study found that the effect of short-term smoking cessation (eg, one year) relative to continued smoking increased bone mineral density at the femoral trochanter and total hip in postmenopausal women.⁸

Strategies

The evidence supports the need for targeted smoking cessation activities in the elderly, who have typically been smoking for a longer period of time and are less likely to attempt quitting.⁹

However, the older patient who attempts to stop is actually more likely to be successful.¹⁰

The reasons for cessation in older smokers may be different from those in younger age groups, and one study found that quitting in the elderly cohort was associated with different subject characteristics from those that predicted successful cessation in a younger population.¹¹ Whatever these characteristics and motives for stopping may be, there are several strategies to help to do so. These include brief interventions, counselling and drug therapies that will be considered here, particularly with reference to their use in the older smoker.

Brief interventions

Brief interventions typically take five-to-10 minutes and involve opportunistic advice, discussion, negotiation or encouragement. The particular features of the brief intervention will depend on several factors, including the patients' willingness to stop smoking, how acceptable they find the intervention on offer as well as any previous history of cessation attempts. NICE guidance⁵ on brief interventions states that they may include:

- Simple opportunistic advice to stop
- An assessment of the patient's commitment to quit
- An offer of pharmacotherapy and/or behavioural support
- Provision of self-help material and referral to more intensive support, such as the NHS Stop Smoking Services.

Brief interventions tailored to the elderly cohort can be integrated into routine care.¹² Even brief simple advice from a

doctor about quitting increases the likelihood that a smoker will successfully quit and remain a non-smoker 12 months later.¹³ Therefore it is worth raising the issue when a patient who smokes is encountered in a range of clinical scenarios; commonly this is in primary care but hospital clinicians also see these patients when they are admitted or when referred for elective surgery. Simply ensuring self-help materials are readily available may increase quit rates compared with no intervention at all.¹⁴

However, elderly smokers are likely to have smoked for many years and so may require more than opportunistic encounters can provide. They are also more likely to be nicotine dependent.¹⁵ More intensive advice and provision of follow-up support may result in higher rates of quitting in this group.¹³

Counselling

Counselling has been demonstrated to be more beneficial than self-help material alone¹⁴ and is an effective non-drug intervention to offer the elderly smoker. It may involve simple brief advice provided by a doctor or nurse, often in the primary care setting, and it has the advantage of being easy to do with the potential of a large population impact. However, in a long-term smoker, a more intensive approach may be required, which can take the form of individual or group-based counselling.

Individual behavioural counselling involves scheduled, face-to-face meetings between

someone who smokes and a counsellor trained in smoking cessation. One study found that in those aged 60 years and over, smoking cessation rates were higher in those who received counselling by their usual primary care physician and a smoking cessation nurse in a non-urgent visit than in routine primary care.¹⁵ A review has looked at trials of counselling by a trained therapist providing one or more sessions, separate from medical care, and found that individual counselling could help smokers quit.¹⁶ Further support can also be provided by telephone contact.

Group behaviour therapy involves scheduled meetings in which people who smoke receive information, advice and encouragement and some form of behavioural intervention, for example, cognitive behavioural therapy. There is evidence for the use of this behavioural group approach in the older smoker,¹² although patient acceptance varies.

Pharmacological interventions

Three forms of pharmacotherapies are approved by NICE: nicotine replacement therapy (NRT); varenicline; and bupropion. These are recommended and prescribed as an aid to help people to quit smoking, typically alongside advice, encouragement and support or referral to a more formal service. Before prescribing a treatment, NICE advises consideration of the person's intention and motivation to quit, how likely it

Box 1: Forms of NRT

Patch
 Inhaler
 Gum
 Sublingual tablet
 Spray
 Lozenge

is they will follow the course of treatment, their preference, any previous cessation attempts and if there are medical reasons why they should not be prescribed particular pharmacotherapies.⁵

NRT

Nicotine in tobacco acts on nicotinic cholinergic receptors in the brain to facilitate neurotransmitter release such as dopamine, in turn producing pleasure, stimulation, and mood modulation. When a smoker stops, a nicotine withdrawal can ensue with symptoms including poor concentration, anxiety, restlessness and increased appetite.¹⁷ Many elderly smokers are nicotine dependent and so withdrawal symptoms can be a significant problem. In addition, smoking is reinforced by conditioning, such that certain stimuli become associated with smoking promoting the urge for a cigarette; these include sensory, behavioural and social factors. Again, in the older smoker, lighting up may have become a habit of several decades.

NRT is the use of various forms of nicotine delivery methods (box 1) intended to replace the nicotine obtained from smoking, thus helping to deal with the withdrawal

symptoms caused by the loss of nicotine from cigarettes.

It is the most widely studied form of pharmacotherapy to aid smoking cessation¹⁸ although most studies did not look specifically at an elderly population. Results show that NRT is effective compared with placebo.¹⁹ A Cochrane review found that all forms of NRT made it more likely that a person's attempt to quit smoking would succeed; the chances of stopping smoking were increased by 50 to 70%. It also concluded that the evidence, although limited, suggested no overall difference in effectiveness of different forms of NRT.²⁰

In the elderly population, special care has to be taken in the use of pharmacological agents. Contraindications to the use of nicotine include severe cardiovascular disease and recent stroke or transient

ischaemic attack (TIA). Possible side effects include nausea, dizziness, headache, palpitations, gastrointestinal disturbances, insomnia, myalgia and skin reactions; in some patients, these may make NRT unsuitable. In choosing the form of NRT, as well as patient preference, it is sensible to consider potential problems of certain delivery routes such as gum being unsuitable to those wearing dentures. Adverse effects related to the specific product type are listed in box 2.

Varenicline

Varenicline is a partial agonist at the $\alpha 4 \beta 2$ nicotinic acetylcholine receptor and aids smoking cessation by relieving nicotine withdrawal symptoms and reducing the rewarding properties of nicotine.²¹

A review has found that varenicline increased the chances

Box 2: Adverse effects of NRT products*Spray*

Nasal irritation, nose bleeds, watery eyes, ear sensations, throat irritation

Gum

Aphthous ulcers, throat irritation

Lozenges

Aphthous ulcers, throat irritation, unpleasant taste

Sublingual tablets

Aphthous ulcers, throat irritation, unpleasant taste

Inhalator

Aphthous ulcers, throat irritation, cough, rhinitis, pharyngitis, stomatitis, sinusitis, dry mouth

of quitting between two- and three-fold compared with placebo, and that the number of people stopping smoking with varenicline was higher than with bupropion. It also found that a trial with nicotine patches showed a modest benefit of varenicline over the patches.²²

Varenicline is generally safe and well tolerated; a study involving smokers aged 65 years and above found that no dose adjustment was required on the basis of age alone.²³ The main side effect is nausea, although this usually settles with time. However, care needs to be taken in prescribing varenicline if there is impaired renal function, and currently under review is the possible link between this drug and depression and suicidal thinking and behaviour; consequently it is to be used with caution and close monitoring in those with a history of psychiatric illness.

Bupropion

Bupropion was initially used as an antidepressant but was subsequently found to reduce the desire to smoke. It became available for this purpose in 2000. Bupropion is an atypical antidepressant and not related to either selective serotonin inhibitors or tricyclic antidepressants. Its mechanism of action with respect to smoking cessation is unclear, but is thought to be due to the inhibition of reuptake of dopamine and noradrenaline in the central nervous system and to be independent of its antidepressant effect.²⁴

Multiple trials have demonstrated that bupropion

increases the number of successful smoking cessation attempts and has an efficacy similar to that of NRT.²⁵ Like NRT, it leads to a near doubling of the smoking cessation rate, achieving long-term abstinence in 19% of smokers who use it to stop.²⁴

Bupropion can be used in elderly smokers but at a reduced dose (one tablet daily). An important contraindication is its use in patients with current or past epilepsy and in addition, it should also be used with extreme caution in patients with conditions predisposing to a low threshold for seizure; for example, a history of head trauma, alcohol misuse, diabetes treated with oral hypoglycaemics or insulin, and in those on medications that lower the seizure threshold such as theophylline, antipsychotics and antidepressants.²⁴ It is therefore important to take a thorough drug history. Otherwise, it is a well-tolerated drug in the elderly having been used for depression in this group.²⁶ The most common side effects include insomnia, agitation, gastrointestinal disturbances, dry mouth and headache.

Further care

It is often most effective to combine non-drug treatments with pharmacotherapy to increase rates of smoking cessation, and it is usual practice for either individual counselling or group therapy to be used alongside one of the medications discussed above.

There are also several other agents that have been suggested

to aid smoking cessation, although these are not currently recommended by NICE. They include the antidepressant nortriptyline, which has been shown to increase quit rates,²⁵ and clonidine, an α -2 noradrenergic receptor agonist. The latter has also been shown to be effective in smoking cessation, but it is associated with serious side effects such as hypotension with rebound hypertension and sedation. Additionally, there is a lack of studies establishing its efficacy and safety in the elderly population.²⁶ In those patients who are finding it difficult on one medication, there is the possibility of combination therapy. Indeed, current literature indicates that combination therapy is statistically more effective than monotherapy.²⁷ However, in the elderly this approach should be used with particular care and with closer monitoring given the risks of polypharmacy. It is also more appropriate at this stage that such patients are referred to their local NHS Stop Smoking Services, which provide counselling and support by specialist advisors.

Conclusion

Smoking is the cause of significant morbidity and mortality, both in the UK and globally; and in elderly smokers, the disease consequence occurs disproportionately because of the long duration of cumulative damage.

Cessation is the most effective method of reducing smoking-induced disease risk

in all age groups including the elderly.¹⁰ There are several options available to help older smokers quit, such as those discussed here, and all have evidence for their efficacy compared with no help at all.

Special consideration needs to be given to the elderly because of such factors as their longer smoking history, comorbidities and drug history. Further study is needed to assess the efficacy of smoking cessation interventions specifically in this group, but in the meantime, clinicians should continue to advise, encourage and support elderly smokers in giving up.

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