Managing tinnitus in primary care

Key learning points:

- Tinnitus is a symptom of many health conditions but for the majority of patients the cause is likely to be hearing loss or unknown cause
- Patients need positive counselling and to be made aware of the viable tinnitus management options that are available
- Primary care nurses need to be aware of 'red flags' that indicate the need for urgent referral of tinnitus patients to specialist secondary or tertiary services

Tinnitus is defined as the perception of sound in the absence of any corresponding external sound source. People who experience it typically describe a ringing, hissing, clicking, or whooshing sound, perceived in one or both ears, or inside the head. Tinnitus is not itself a condition, but rather a symptom common to a number of medical conditions. Some forms of tinnitus are objective in that they can be heard on examination. For example, if the patient has a carotid bruit (a sound heard when blood passes over a blockage in the carotid artery) then a pulsing sound corresponding to the report of tinnitus can be heard by listening to blood flow in the neck. Tinnitus may also be associated with occlusion of the ear canal, compacted ear wax, eardrum perforation, ear infection (otitis media) or abnormal growth of bone in the ear (otosclerosis). It might also be associated with or exacerbated by systemic conditions such as unstable diabetes, hyperthyroidism, anaemia, hypertension, and is commonly associated with Ménière’s and Paget’s disease. In rare cases, tinnitus is generated by the presence of a slow growing benign intracranial tumour such as an acoustic neuroma.

In the vast majority of cases, tinnitus is subjective, with no clear identifiable cause. Management is often led by the observation that tinnitus invariably occurs alongside hearing loss and deafness. A reasonable assumption is that tinnitus emerges as a consequence of the hearing brain insufficiently adjusting to the loss of sensory input which occurs with hearing loss. Only about 10% of people with tinnitus would be assessed as having normal hearing on a standard audiogram. If very high frequency audiometry is conducted (above the standard clinical test range), about 99% of people with tinnitus show some hearing loss.

Around 10% of the population will have some experience of prolonged tinnitus, and prevalence rises to 30% among those over the age of 50. For about 1% of people, tinnitus is sufficiently
intrusive to impair quality of life. Symptoms most commonly associated with persistent or chronic tinnitus are anxiety, depression, insomnia, and cognitive and communication difficulties. In England alone, an estimated 750,000 GP consultations take place every year where the primary complaint is tinnitus, with an estimated 250,000 referrals from primary care to secondary or tertiary care services.\(^1\) The number of new cases of tinnitus has risen annually over the last decade, an effect attributed to an increased awareness of the problem, increases in exposure to leisure noise such as personal music players, and our ageing population.\(^2\) As such, tinnitus represents a major and growing healthcare burden.

**DIAGNOSING TINNITUS**

There is no simple objective measure of tinnitus, so diagnosis of the presence of tinnitus and the impact it is having on a patient relies heavily on their self-report (at the secondary care level this involves the use of validated questionnaire on tinnitus severity, quality of life, depression, and anxiety). Self-report should accompany a number of assessment procedures to rule out causes that could be managed in primary care, or potential causes that require specialist investigation and management in secondary or tertiary care centres. Recommended assessments to be conducted at each level of care are outlined in the Department of Health’s good practice guide (GPG) for the provision of tinnitus services.\(^2\) At the primary care level the GPG recommends the assessment of hearing, tinnitus onset and quality (what does it sound like, is it pulsing?), level of distress, anxiety, depression, insomnia, whether there is evidence of a carotid bruit, general medical health (is blood pressure and cranial nerve function ok?) and otoscopy (is there ear occlusion, infection, or a perforated ear drum?)\(^1\)

**MANAGEMENT OF TINNITUS**

There is no singularly effective treatment for tinnitus; however a number of management options are available to alleviate the associated symptoms.\(^3\) Management starts with effective triage in primary care. The GPG suggests that patients with bilateral, non-bothersome tinnitus without hearing difficulty can be managed in primary care through initial advice and reassurance, excluding the presence of excess earwax, external ear infection, or other conditions such as hypertension which may cause or exacerbate tinnitus.\(^3\)

Advice and reassurance may range from educating the patient about tinnitus and providing them with written information leaflets provided by charities, to providing them with formal counselling, depending on the resources available within a given practice. Patients may also be referred to reliable online sources of information (Map of Medicine and the British Tinnitus Association websites are recommended)\(^4\) or to local tinnitus self-help groups. The GPG also suggests that significant co-morbid anxiety, depression, or insomnia may be managed pharmaco logically.

About one in three patients will need referral to secondary or tertiary services for further management.\(^1\) Those with non-bother-some tinnitus and hearing difficulty can be referred directly to local community audiology services. Assessment results that indicate a need for urgent referral to specialist secondary care (second-level specialist audiology/ENT services) include sudden hearing loss, significant distress, cranial nerve symptoms, or pulsatile tinnitus. A routine referral is also indicated if assessment reveals unilateral hearing loss, persistent tinnitus, unilateral tinnitus (heard in one ear only), or significant impairment of quality of life.\(^3\)

Within secondary care recommended management strategies include patient education, relaxation therapy, Tinnitus Retraining Therapy (TRT), Cognitive Behavioural Therapy (CBT), and sound enrichment using ear level sound generators or hearing aids. The use of most of these strategies however is not yet supported by any reliable evidence base,\(^4\) nor are there clear factors to predict which management strategy would likely work best for a particular patient. It is often trial and error and determined by clinical opinion and patient preference or motivation.

**THE ROLE OF THE PRIMARY CARE NURSE**

Practice nurses and nurse practitioners will encounter many patients in clinic who are bothered by tinnitus; patients who are hypertensive, have hearing loss, or have compacted earwax for example. Historically, tinnitus patients have been told that they need to ‘learn to live with it’. Such negative counselling can be devastating for a person who is acutely distressed by tinnitus. Rather, patients need to be made aware that if their tinnitus is bothersome, there are a number of management options to consider trying. As most people with tinnitus have hearing loss, a popular first line of management is to fit a hearing aid which would improve communication and at the same time amplify background sound, thus reducing the audibility of the tinnitus sound. There are many management approaches using combinations of sound and supportive counselling that might be explored.

Part of the counselling provided to tinnitus patients involves reassurance that for many, both the perception of the tinnitus sounds and the emotional symptoms they experience should improve over time. A basic understanding of why tinnitus has occurred is often sufficient to demystify it, dispel preconceived worries, and negate the need for further management. Nurses need to understand the clinical features and natural history of tinnitus to decide whether the patient presenting to them with the complaint requires simple education and reassurance, or whether a further diagnostic work-up or onward referral is indicated.

**REFERENCES**


