

Managing fibromyalgia in midlife and old age

Elderly patients presenting with multiple pains, disturbed sleep, fatigue, poor memory and slow thinking may have fibromyalgia. This is one of a spectrum of “central sensitivity syndromes” in which there is oversensitivity of certain areas of the brain and abnormal neurotransmitter activity. The diagnosis is symptom-based and may be made despite the presence of other disease.

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A recent survey found that 10% of European women aged 75–84 report symptoms that fulfil the criteria for fibromyalgia.¹ Another survey showed that American women had a slightly lower incidence in this age group, but it was still surprisingly high (7.4%).² The incidence of fibromyalgia in men is substantially lower, but the peak incidence remains at around 80 years of age (up from a mean of 0.5% to about 3%).^{1,2}

Both the surveys found that the average age of patients with fibromyalgia symptoms is 50 years, with incidence rising to age 80 and then dropping sharply to a level approaching that of teenagers (around 1%) by age 85.³

The diagnosis, controversial in itself, is made more difficult as fibromyalgia in older patients is generally a phenomenon secondary to other disease states, particularly painful arthritic and rheumatoid problems.⁴ In younger age groups, the condition is more usually primary, triggered by mental or physical trauma — often a road accident: 22% of whiplash

injuries result in development of fibromyalgia — making diagnosis more straightforward.⁵ There is thus a reluctance to make a diagnosis of fibromyalgia in the elderly as symptoms may easily be attributed to other medical, physical, or even mental problems.

Nonetheless, as early treatment substantially improves an otherwise poor success rate, it is important to consider fibromyalgia at a first consultation. Unfortunately it may be a year or more before patients present with fibromyalgic symptoms to their GP, and a recent survey found that it is on average a further 2.3 years before the diagnosis is made.⁶

Definition

Fibromyalgia has previously been called fibrositis, and psychogenic or muscular rheumatism. The name change to fibromyalgia produced a formal definition by the American College of Rheumatology of: *widespread pain for over three months, above and below the waist,*

axial, and on both sides of the body, with pain to palpation at 11 out of 18 specific points. However, a selection of associated symptoms and comorbidities are always found beyond that formal definition.⁴

Common additional symptoms related to the pain are stiffness and paraesthesia, but patients find the most debilitating are fatigue, unrefreshing and disturbed sleep, slow thinking ability, and poor memory.

The American College of Rheumatology has now proposed new diagnostic criteria, which have made assessment of symptoms more clinically relevant by including the comorbidities and the other non-pain features in their scoring system.⁷ The important aspect of these symptom-based criteria is that there is no need to “believe” in fibromyalgia as a real disease entity. Patients who have a high score on the assessment questionnaire will have already started to make the neurotransmitter and central neurological changes associated with progression of their symptoms. To prevent that progression,

treatment must be instituted as early as is practical.

Is fibromyalgia a real disease?

Medically, there is much argument about whether fibromyalgia is a “real” disease or not — despite research that has demonstrated clear central neurological changes associated with the fibromyalgia symptoms. However, not all of these changes are specific to fibromyalgia, with most being common to a number of other chronic pain syndromes.

The emerging theory is that fibromyalgia is part of a spectrum of disorders in which pain, fatigue and sleep upset are features. These disorders also include chronic fatigue syndrome, irritable bowel syndrome, and post-traumatic stress disorder. They have been termed “central sensitivity syndromes” since they all exhibit over-excitability of certain areas of the brain,⁸ with fibromyalgia patients particularly displaying enhanced connections between networks relating to psychological response to pain and those for memory, attention and thinking. This means that patients with fibromyalgia typically focus their attention more strongly on pain so that their concentration on and memory for other things becomes dulled. This “foggy” thinking is termed dyscognition, but fibromyalgics call it “fibro fog”.⁹

Neurological changes

The sensory cortex in fibromyalgia has an expanded surface area for the reception of pain so that patients exhibit allodynia (pain resulting from a non-noxious stimulus, sometimes outside the pain area) and also hyperalgesia: functional MRI investigations have

demonstrated that fibromyalgic patients genuinely feel pain from a 50% lower stimulus compared with healthy controls.¹⁰ Endogenous opioids are raised but many of the μ -opioid receptor sites in the brain appear to be unavailable, particularly in areas controlling spontaneous pain and regulating the emotional response to pain.¹¹

Other neurotransmitters affected are serotonin and noradrenaline, both of which are involved in the descending inhibitory pain pathways of the spinal cord. They also have modulatory function in mood, cognition, fatigue and sleep. So the low levels of both found in fibromyalgia contribute largely to the widespread pain and associated symptoms of the disorder. Drug treatment focuses particularly on boosting the levels of these two neurotransmitters.¹²

Disturbed sleep

One of the associated symptoms is disturbed sleep, a problem reported in many rheumatological conditions,¹³ but patients with fibromyalgia also complain of unrefreshing sleep. Some of the sleep problems may be related to the commonly found comorbidities of restless legs syndrome and periodic limb movement in sleep, but when sleep has been constantly disturbed there is an increased production of proinflammatory cytokines that promote pain.¹⁴ This upsets sleep further, which again enhances pain — in a vicious cycle. Improving sleep patterns by attention to standard “sleep hygiene” procedures and treatment of sleep-affecting comorbidities is therefore likely to reverse the vicious cycle and

improve fibromyalgic symptoms. Some patients find melatonin (Circadin) useful in this regard.¹⁵

Effective treatment

Until recently the treatment of fibromyalgia had seen little success, with almost 50% of patients being unable to tolerate drug treatment or failing to respond to it adequately. However clinical trials have now demonstrated that a small group of drugs is genuinely useful and that a non-pharmacological approach can show significant benefits. Fibromyalgic patients are often over-sensitive to drugs, some having the comorbidities of multiple allergies or “multiple chemical sensitivities” so that they complain of unacceptable side effects and fail to comply with dosage. Additionally, the polypharmacy suffered by many elderly patients suggests that avoiding the introduction of another drug would be helpful, so the first line of treatment for the elderly should be non-chemical if possible.¹⁶

Non-drug treatment

Exercise, gentle to start with, provides real benefits. Even half an hour a day for the minimally active gives a significant reduction in pain and general improvement in mobility.¹⁷ However, patients need to be warned that there may be an initial increase in pain, stiffness and fatigue for a week or two, but once muscles become re-educated, useful benefits result. Hydrotherapy has proved effective,¹⁸ but as this is not always readily available in the UK, a reasonable substitute is a warm bath after exercise or before bed. This reduces pain and stiffness and improves sleep.

Education about the condition is surprisingly helpful.¹⁸ Patients need to know that activity will not cause long-term upset and that work and social interaction is a distraction from pain that brings both mental and physical benefit. In this regard, cognitive behavioural therapy (CBT) focusing on coping with stress, modifying lifestyle, reducing “catastrophic thinking” and changing pain behaviour has proved useful.^{19,20}

Patients wanting to try alternative therapies should generally be encouraged, as time spent in promoting well-being is valuable. Acupuncture, for instance, can boost energy, help patients relax and cope better, and improve sleep.²¹ It can also aid in the treatment of some comorbidities such as irritable bowel syndrome, headaches and restless legs syndrome.

Medication

Pharmacologically the favourite drug, commonly used for most chronic pain syndromes, has been amitriptyline (a tricyclic antidepressant inhibitor of serotonin and noradrenaline transporters), but the elderly can find it too sedating although a small dose (10–25mg) taken at night may be helpful.²² The Beers Criteria, which is a review of medications of potential concern in the elderly, include amitriptyline in the list of drugs considered to be inappropriate for patients aged 65 or older, and recently a report has highlighted amitriptyline as a cardiovascular risk.^{23,24} Therefore, the tricyclics should normally be replaced by the modern serotonin and noradrenaline reuptake inhibitor (SNRI) drugs of which duloxetine

(Cymbalta), the best researched, can give a global improvement in fibromyalgic symptoms.¹² Duloxetine is the treatment of choice for younger age groups, and the first drug to be added to exercise and CBT in the elderly.

The European League Against Rheumatism (EULAR) recommends combination therapy, preferably pharmacological and non-pharmacological.¹⁸ However pregabalin (Lyrica), which was the first drug to be specifically recognised by the US Food and Drug Administration (FDA) for fibromyalgia treatment, doubles the success rate in combination with an SNRI.²⁵ Pregabalin, a more potent successor to gabapentin, is an antiepileptic used for neuropathic pain and as a mood stabiliser and anxiolytic. It is effective at low dosage in fibromyalgic pain suppression and also restores more normal deep-sleep patterns and reduces “restless leg” activity.²⁶

Providing standard analgesia is more of a problem since lack of μ -opioid receptor binding capacity means that the strong opiates are ineffective. Nonetheless the weaker, codeine containing compounds are sometimes helpful and buprenorphine, which reduces hyperalgesia, can be beneficial. Tramadol has both weak opioid and SNRI action and has thus proved a good analgesic in fibromyalgia, although care must be taken not to cause serotonin toxicity if combined with other serotonin-boosting drugs. It is often beneficially combined with paracetamol, which indeed can be useful alone. However the standard non-steroidal anti-inflammatories are not generally useful, and nor are steroids, as there is no inflammatory

process unless associated with a concomitant disease.²⁷

Diagnostic considerations

The diagnostic criteria for fibromyalgia state that the presence of another disorder does not exclude the diagnosis unless that disorder could otherwise explain the pain; nonetheless the treatment of other disorders and comorbidities is important and can produce significant improvement in fibromyalgic symptoms. Hypothyroidism may present with similar symptoms and may be comorbid in a subgroup of fibromyalgics.²⁸ This needs to be tested for as correction will make a real difference. Another subgroup has low levels of growth hormone, but although replacement therapy can help, it is a long-term, very costly treatment with significant side effects and is not recommended.²⁷

Other rheumatoid and arthritic problems must be considered, with polymyalgia rheumatica being the most easily confused with fibromyalgia.²⁹ It has a more rapid onset with more severe muscle stiffness, but is readily treatable with steroids so must not be missed. Other myalgias, particularly in this age group the drug induced (eg, statins and ACE inhibitors), should be eliminated before diagnosing fibromyalgia, as must infections that can cause muscle pain and fatigue — notably hepatitis and Lyme disease.

Conclusion

It is well worthwhile being aware of fibromyalgia as a possible diagnosis in the elderly, since early treatment may not only help your patient, but also reduce

or eliminate more frequent and unproductive surgery visits in future. To aid diagnosis, the Fibromyalgia Network, an internet-based patient information service, has produced a questionnaire using the new diagnostic criteria that is ideal for rapidly assessing potential sufferers. Those scoring within the fibromyalgic parameters should of course have proper clinical and laboratory investigation, but it is helpful as a screen, and keeping a copy handy in the surgery desk is recommended.³⁰

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