Chronic pain is not an inevitable part of aging, but it is, unfortunately, a fairly common occurrence among those aged 65 or older. Studies have indicated that as many as 50% of older adults who live in the community and 45% to 80% of those in nursing homes suffer from this problem. Although chronic pain can have significant impact on the lives of persons of any age, it may have a greater effect on older patients than on younger adults.

All patients with pain should have complete evaluations to rule out underlying causes that can be treated. However, for many patients no underlying cause can be determined, or if it is identified, either it cannot be treated or even if it is, the pain continues. For these patients, the management of pain becomes the goal of treatment.

Multiple studies have demonstrated that when older patients have pain it is less likely to be adequately treated than when it is present in younger adults. No doubt one reason for this is that as we age we are more likely to develop diseases that can cause persistent pain, including commonly occurring ones such as osteoarthritis, diabetic peripheral neuropathy, herpes zoster, Parkinson disease, and cancer. This has often resulted in pain being viewed as a "normal" and inevitable part of aging that must be accepted in return for having a long life.

It is true that there are challenges to treating pain in the elderly that are less likely to be present in younger adults, but they should not be viewed as insurmountable obstacles to providing relief. In this article I show how these challenges can be addressed, and I discuss the pros and cons of the various treatment options.

SPECIAL PROBLEMS IN IDENTIFYING AND MEASURING PAIN IN GERIATRIC PATIENTS

Pain is a subjective complaint for which health care professionals usually depend on patient self-report to determine whether the patient is suffering from it and whether it is severe enough to warrant being addressed.

However, geriatric patients may suffer from impairments in communication due to problems such as strokes, Alzheimer disease, and Parkinson disease. Thus, commonly used instruments to assess pain, such as the Visual Analogue Scale and Verbal Numeric Rating Scale, may have limited roles for these patients. Other instruments, most of which were originally developed for young children, have been employed for older patients. These include the Faces Scale, where patients are asked to rate their level of discomfort based on facial expressions ranging from smiling to crying, and the Pain Thermometer, which uses the image of a thermometer and asks the patient to rate the pain according to this.
However, even these instruments require a degree of ability to communicate in order to obtain valid and useful information, and thus they may be unusable for certain cognitively impaired patients. For them, health care professionals must change their focus from waiting for these patients to complain about pain before addressing it to careful observation of them to identify behaviors that indicate discomfort, such as grimacing or inability to sit or lie comfortably.8

The role pain plays in behavioral and psychiatric symptoms in patients with cognitive impairment is often overlooked, but it has been shown that pain can be associated with socially inappropriate behavior, resistance to care, abnormal thought process, and delusions.9 Instead of treating these problems with psychotropic medications as is commonly done, treating the pain, the probable underlying cause, makes more sense. Addressing and reducing pain can have a significant impact on behavioral disturbances in patients with dementia.10

A study that examined the association between analgesic medications and delirium found that for patients in whom severe acute pain is likely to be present, most notably in patients with hip fractures, lower doses of opioids were associated with an increased risk of delirium. The authors speculated that this may have resulted from undertreatment of the pain and that this contributed to the development of delirium. They specifically noted that although opioids need to be used cautiously in patients at increased risk for delirium, fear of this should not prevent the appropriate treatment of pain.11

Unfortunately, even when physicians recognize the presence of pain among these patients, their attempts to alleviate the pain may fail because they do not take into account the patient’s status. For example, in hospitals it is common to prescribe analgesic medications to be administered when the patient requests them. Obviously, patients who are unable to communicate will not be able to ask for them. The physicians may feel they have addressed the pain by prescribing medications in this manner without recognizing that it is unlikely that the patients will ever receive them.

**THE COMPLEXITY OF PAIN**

Although pain among older adults is sometimes viewed as something that needs to be endured unless there is an underlying cause that can be remedied, it appears to be much more pernicious. A study that examined pain in older men found that it was associated with increased frailty, which itself is a predictor for additional health problems and death.12 This study also found that mood may be a more important factor in the association between pain and frailty than physical illnesses, highlighting the importance of not only performing a comprehensive physical evaluation of geriatric patients but also carefully assessing their mental health.

The possibility that changes in the brain may play a role in chronic pain in older adults is indicated by the findings of another study that compared the MRI scans of geriatric subjects with chronic low back pain with those of persons without this problem. Differences were found between the brains of those who suffered from this pain and those who did not, including significant reductions in gray matter in the posterior parietal cortex in the former group.13 This is preliminary research, but it does offer a suggestion as to why patients may develop pain after traumatic injuries to the brain or if they suffer changes in the brain as the result of other diseases.

**TREATING CHRONIC PAIN IN THE ELDERLY**

Analgesic medications. Treating chronic pain with medications can be demanding in patients of any age. Clinicians are often faced with the difficult task of measuring possible benefits against potential serious, even life-threatening adverse events (AEs). Because of the frequency of other health problems and of the use of other medications that can interact with analgesics, managing pain in geriatric patients is often fraught with even more challenges than are encountered among younger patients.

When prescribing analgesic medications for geriatric patients, the general recommendation for using any medications for non–life-threatening health problems in this population should be followed: start low and go slow. Unfortunately, there is limited research on dosing of analgesic medications specifically for the elderly, especially for NSAIDs, antidepressants, and anti-convulsants, compared with that required for the management of pain in younger patients.

Many older adults, even those who are relatively healthy, have reductions in hepatic and renal function, which can significantly affect the metabolism of many medications. Another issue that is commonly faced in the treatment of elderly patients is that because of health problems other than their pain, they may be taking other medications that, depending upon the drugs in-
Concerns about the risk of multiple AEs—
including gastrointestinal (GI) toxicity,
effects on renal function, and cardiovascular
problems, such as myocardial infarction and
stroke—resulted in the panel’s conclusion that
for many geriatric patients the opioids
may be a safer choice than the NSAIDs.
Nonpharmacologic therapies can be efficacious for the management of chronic pain in any age group, and for the elderly they have the additional benefit of bearing little risk of AE if performed correctly.

**Opioids.** There is no question that opioid analgesics can play a major role in the treatment of moderate to severe acute and cancer-related pain, but their use in patients of any age with chronic non-cancer pain still remains controversial because of their multiple side effects. Some of these AEs, such as sedation, respiratory depression, and constipation, are more likely to cause significant problems in elderly patients. Also, as with any patients using opioids for an extended period of time, there is the risk of abuse and addiction among older patients, and it is important to continuously monitor users for these problems along with other potential AEs.

One AE associated with opioid use is of especially heightened concern for the elderly population. Because this age group is most likely to develop delirium, it is important to avoid drugs that might increase the risk of this AE. A literature review on the association between medications and delirium found that of the drugs which have been studied benzodiazepines (which the AGS guideline correctly notes have little role in the management of chronic pain) and opioids appear to be most likely to increase the risk of delirium. This review did report that the research on several other classes of drugs, including the NSAIDs, was too limited to make a final judgment on their association with delirium. Of the opioids that were studied, oxycodone appears to pose the least risk of contributing to delirium and meperidine the most. It should be noted that most of the studies that included oxycode done probably used the immediate-release formulation of this drug rather than the extended-release formulation which, because it may accumulate, might be more strongly associated with delirium. Because of the unique AE associated with meperidine, it should not be used as an analgesic for patients in any age group.

In general the guidelines for the use of opioids in the elderly are essentially the same as for younger patients. All should be started on short-acting (SA) opioids and if they need to be taken throughout the course of the day to attain sufficient benefit, a long-acting (LA) opioid should then be considered. No patient who is not already taking an opioid should be started on an LA formulation.

The one opioid for which special caution needs to be taken when used in the elderly is methadone. This is an excellent analgesic, but because its analgesic effect lasts only 6 to 8 hours, which is much shorter than its half-life of 16 to 30 hours, the repeated dose required for pain relief can result in accumulation of the drug in patients with reduced hepatic and renal function. Also initial dosing can be tricky as it is a pharmacologically LA opioid; thus, there is no SA form with which to begin and to titrate dose. Methadone can be used in elderly patients; however, I would recommend starting at a very low dose of 5 mg every 8 hours and then slowly titrating up as indicated.

**Other analgesic medications.** The AGS guideline provides a shorter discussion of the use of medications other than the NSAIDs and...
opiods but notes that these are of great importance in the management of many painful conditions. Neuropathic pain such as diabetic peripheral neuropathic pain (DPNP) and postherpetic neuralgia (PHN) can occur at any age but is more likely to afflict older persons. Although opioids can provide some benefit for these conditions, the non-opioids, including anticonvulsants, antidepressants, and certain topical agents, may provide more relief from neuropathic pain.

Anticonvulsants. Many anticonvulsants appear to provide analgesia, but the most commonly used now are pregabalin and gabapentin. The major benefit of these two medications is a much more benign side-effect profile than the earlier anticonvulsants. Pregabalin is FDA approved for the treatment of PHN and DPNP along with fibromyalgia. Gabapentin is approved for PHN. Of the two medications, pregabalin may be an advantage in that it tends to be less sedating than gabapentin; in many patients this AE can prevent achieving an optimal analgesic dose of the latter.

Antidepressants. The analgesic effects of antidepressants have been recognized for almost 40 years. Although they are still often commonly referred to as “adjuvant analgesics,” which suggests that they do not provide direct pain relief in the same way as opioids or NSAIDs and that their major benefit is associated with their antidepressant effects, it has been repeatedly demonstrated that they provide direct pain relief. The antidepressants that have been shown to be the most effective as analgesics are the tricylic antidepressants (TCAs) and the other serotonin-norepinephrine reuptake inhibitors (SNRIs), including duloxetine and venlafaxine. The only one that is FDA approved as an analgesic is duloxetine, which is approved for DPNP pain related to osteoarthritis and low back pain, and fibromyalgia. Milnacipran is another SNRI that is FDA approved for fibromyalgia. However, unlike duloxetine and venlafaxine, it has not been approved for the treatment of depression in the United States, although it is approved for this indication in some European countries. An advantage of venlafaxine is that unlike duloxetine and milnacipran it is available in generic form and is therefore less expensive, a not insignificant issue for many elderly patients.

Although they have never been approved by the FDA as analgesics, TCAs appear to be as efficacious as the newer SNRIs. However, the side effects of the TCAs generally make them a poor choice for elderly patients. All TCAs have anticholinergic effects that can cause or exacerbate problems with urination and constipation and, especially in older patients, problems with cognition. Their antihistaminic properties can cause sedation, and they also carry the risk of impairing cardiac conduction. Even though TCAs such as desipramine and nortriptyline have fewer anticholinergic and antihistaminic properties than the more commonly used amitriptyline, I would not recommend the use of any TCA for elderly patients unless special circumstances exist.

As to choosing between an anticonvulsant and an antidepressant for neuropathic pain, there are still no clear-cut predictive factors for which is more likely to be effective. One deciding factor is whether patients have comorbid depression, a common problem with chronic pain in patients in any age group but especially in the elderly. Treatment of depression in patients with chronic pain can also have a significant impact on the pain. Venlafaxine and duloxetine are at least as effective for the treatment of depression as the selective serotonin reuptake inhibitors (SSRIs), which generally have minimal analgesic effects. Thus, when both pain and depression are present, there is little reason for patients to receive an SSRI. An exception would be a patient who has been taking an SSRI for an extended period of time for depression, and it is believed that continued use of the antidepressant is indicated to prevent relapse.

Lidocaine 5% patch and capsaicin. The AGS guideline notes that two topical analgesics in addition to...
the topical NSAIDs are worth considering; lidocaine 5% patch and capsaicin. The major advantage of both of these is that not only can they provide significant analgesia but because they are applied topically and exert their effects locally, they have minimal risk of systemic AEs or drug-drug interactions.

Although both of these drugs are efficacious, my preference is to try the lidocaine 5% patch first. The advantage I have found it to have over capsaicin is that patients can have difficulty in tolerating higher, more beneficial concentrations of capsaicin because of the localized burning sensation it can cause. This problem is not related to a pathologic process, so it is not a contraindication for using it, but it can be quite uncomfortable.

Lidocaine 5% patch is FDA approved only for PHN, but it has been used for many other pain conditions including DPNP, nonspecific low back pain, and arthritic pain. Because of its benign side-effect profile, I would certainly recommend considering its use for any localized pain as it may provide marked relief with little risk of impairing the patient’s overall health.

**NONPHARMACOLOGIC MANAGEMENT**

The most recent AGS guideline on geriatric pain reviewed only analgesic medications, but earlier editions of the guideline also dealt with nonpharmacologic therapies and these should not be overlooked. They can be efficacious for the management of chronic pain in any age group, and for the elderly they have the additional benefit of bearing little risk of AE if performed correctly.

Physical therapy (PT) can be very useful, especially for patients who have a pain-causing disease or injury that resulted in reduced activity levels leading to decreased exercise tolerance. PT can aid these patients in learning to maximize their activities. Occupational therapy (OT) is also worth considering. Although its name might indicate to some patients that it would only be beneficial for those who are still actively working, in fact OT assists patients in performing activities of daily living and can aid them in finding alternative, less painful ways to do these activities.

Psychotherapeutic techniques can not only help patients cope with chronic pain but can also reduce the level of pain. These techniques are also beneficial when comorbid depression and pain are present.

Acupuncture can provide analgesia for a variety of chronic pain conditions, including low back pain and osteoarthritis. If it is performed by a trained professional and disposable needles are used, there is little risk of AE.

Transcutaneous electrical nerve stimulation (TENS) is commonly used in PT, but it can also be prescribed for patients to use at home. It can not only provide relief when pain is present but can also be prophylactic when used before patients engage in activities that might be painful and which they cannot avoid, such as sitting in a car for an extended period. The use of a TENS unit can be easily taught and it, too, carries little risk of AE. The only caution would be in the patient who has a cardiac pacemaker. This is not a contraindication for the use of TENS as long as the electrodes for it are not placed close to the pacemaker. However, for patients who do have pacemakers, I would recommend discussing the use of TENS with their cardiologist before prescribing it.

**REFERENCES:**