Chronic Disease and Mental Health

Kenneth I. Robbins, M.D.
Medical Director
Stoughton Hospital Geropsychiatry Unit

Medical Director
Rock County Mental Health

Adjunct Professor of Psychiatry
University of Wisconsin

General Principles

- Patients with major psychiatric illnesses have an increased mortality. This is in part related to the risk of suicide, but more so to their increased incidence of medical illnesses.
- Compared with the general adult population, patients with the following psychiatric illnesses have an increased mortality of:
  - Schizophrenia 3.8 x increase
  - Depression 3.15 x
  - Bipolar Disorder 3 x

The incidence of diabetes mellitus, cardiovascular disease and strokes is particularly high.
General Principles

- The converse is also true. Patients with chronic illnesses have a significantly higher incidence of psychiatric illnesses, particularly depression and anxiety disorders.

- MDD is 2X as common in patients with chronic medical illnesses
- MDD occurs in 25-35% of pts who have had an MI, and 18-20% of those with CAD but no MI
- After an MI, those with a MDE have a 4 times greater chance of death within 6 months, even in those with similar ventricular functioning
- MDD occurs in about 25% of stroke survivors

The increased incidence and cost of these chronic illnesses when someone is also depressed is as follows:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Incidence of Illness</th>
<th>Cost Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Disease</td>
<td>35%</td>
<td>163%</td>
</tr>
<tr>
<td>Cancer</td>
<td>25%</td>
<td>100%</td>
</tr>
<tr>
<td>Asthma</td>
<td>40%</td>
<td>183%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>25%</td>
<td>109%</td>
</tr>
<tr>
<td>Stroke</td>
<td>35%</td>
<td>100%</td>
</tr>
<tr>
<td>Arthritis</td>
<td>25%</td>
<td>183%</td>
</tr>
<tr>
<td>Hypertension</td>
<td>22%</td>
<td>103%</td>
</tr>
</tbody>
</table>
General Principles

It is not completely clear why this association exists, however, it is becoming increasingly clear that depression is associated with changes to the inflammatory response, the immune system and clotting.

Pain

- Chronic pain is reported by 50% of those over 65 years old.
- In those over 75, 2/3 report pain, almost half in multiple sites and 1/3 as severe in at least one location.

Pain and the Elderly

- Less likely to report pain (accepted as part of aging or don’t want to be a bother or don’t want it to define them)
- A change in their activity level, mental status or mood may be the only clue
- Undertreated pain is associated with poor sleep, change in mood, social isolation, and immobility
Pain in the Elderly

- 70% of pain in the elderly has not been treated, a combination of missed diagnosis (didn’t ask or person denied), providers not taking the complaint seriously, and tendency of elderly to not seek out treatment (depressed and hopeless, feel it is part of aging and there is no fix, or denial).

Pain in the Elderly

- Of the remaining 30%, many of those with pain have not been treated adequately; the pain and its associated problems remain
- Reporting and describing pain can have cultural implications.
- Families may give a very different history than the patient

Chronic pain in the Elderly

- The treatment of chronic pain can include a number of modalities including, pharmacologic, physical medicine, behavioral medicine, neuromodulation, interventional, and surgical approaches
- Those with chronic pain require ongoing evaluation and education
Chronic Pain in the Elderly

- Currently available treatment modalities lead to about a 30-40% decrease in chronic pain, though that may be enough to significantly improve the quality of life.
- Psychological tools are often a necessary adjunct in helping people adjust to their new reality.

Pharmacological agents are the most commonly used treatment for chronic pain. Their major categories include:

- Non-opioid analgesic agents (e.g., aspirin, acetaminophen, non-steroidal anti-inflammatory drugs (NSAIDs), COX-2 Inhibitors (significant CV risk))
- Tramadol

- Opioids
- Alpha 2 adrenergic agents
- Antidepressants
- Antiepileptic drugs
- Muscle relaxants
- Topical analgesic agents
Chronic Pain in the Elderly

- The choice of the appropriate initial therapeutic strategy depends on making a proper diagnosis.
- The first step is to distinguish neuropathic pain from nociceptive pain.

Chronic Pain in the Elderly

- Nociceptive pain is caused by tissue injury, inflammation and/or mechanical deformity. It generally responds well to traditional pain management.
- Neuropathic pain results from damage to or pathology within the nervous system. It can be central or peripheral in the NS.

Nociceptive Pain

- Pharmacologic approach generally involves non-narcotic and opioid analgesia.
- Generally acetaminophen then NSAIDs, then antidepressants, then narcotics, in that order, are tried. A topical NSAID, declofenac (Voltaren) decreases GI and renal risks. If pain is localized, topical lidocaine or capsaicin may be helpful.
Nociceptive Pain

- Narcotics should be reserved for those who can take them reliably and who have failed with other agents

Nociceptive Pain

- It should be recognized that the evidence for the effectiveness of long-term opioid therapy in terms of pain relief and improved functional outcomes is limited, and that the risk of opioid overdose increases with increasing dosing

Neuropathic Pain

- The initial management of neuropathic pain involves trying to establish and diagnosis, then targeting the treatment.
- If nerves are impaired because of drugs or compression, fixing the cause can eliminate the problem
Neuropathic Pain

- For most patients, if pharmacological agents are necessary, the first choice is usually an antidepressant (tricyclic or SNRI) or a calcium channel alpha 2-delta ligand (gabapentin and pregabalin) with topical therapy (lidocaine) when the pain is localized.
- Opioid medications and Tramadol are second line agents.

Neuropathic Pain

- Certain medications may be considered for the treatment of specific causes of neuropathic pain, such as carbamazepine for trigeminal neuralgia.

Chronic Pain and Depression

- Up to 40% of those with chronic pain also meet criteria for a MDD.
- 65% of those with MDD complain of chronic pain, generally musculoskeletal pain.
- In chronic pain patients referred to a comprehensive pain program, about 50% also have depression.
Chronic Pain and Depression

- In patients with unexplained chronic pain, approximately 2/3 have depression vs 20-30% of those with medically explained pain.
- 5-15% of those with chronic pain experience suicidal ideation with a plan.

Chronic Pain and Depression

- Those with chronic pain and depression vs those with chronic pain report more intense pain, a feeling of decreased control of their lives, more unhealthy coping strategies, greater disruption of sleep, energy, exercise, social activities and sexual relationships. Their functional outcomes are significantly diminished.

Chronic Pain and Depression

- In anyone with chronic pain, there should be a careful history taken from the patient and family, looking for signs of depression. If there is evidence to support it, a combination of antidepressant medication and talk therapy is critical. In addition, the risk of suicide needs to be carefully assessed and monitored.
Chronic Pain and Substance Abuse

- There is a very high risk of substance abuse amongst chronic pain patients, including those of geriatric age. A careful history of both the patient and the family is important. The substance abuse may trigger psychiatric conditions that exacerbate the pain, and will increase suicide risk significantly.

Psychological Approaches to the Treatment of Chronic Pain

- Cognitive Behavior Therapy
- Biofeedback
- Meditation, Relaxation Therapy and Guided Imagery
- Other Psychotherapy

Delirium

- When faced with someone who has developed significant cognitive impairments, one must distinguish between delirium and dementia
- Delirium is an acute and sudden change in attention and overall cognitive function. (Not always to easy to be sure)
- There is a fluctuating course with an altered level of consciousness (subjects can be drowsy, semi-comatose or in a coma)
Delirium vs Dementia

- Dementia generally has a slowly progressive course
- People with dementia are generally alert and symptoms are reasonably consistent through the day

Delirium

DSM IV diagnostic criteria
1. Disturbance of consciousness (reduced clarity of awareness) with reduced ability to focus, sustain or shift attention
2. A change in cognition or the development of a perceptual disturbance not better explained by dementia

Delirium vs Dementia

3. The disturbance develops over a short period of time (hours to days) and fluctuates during the day
4. There is evidence (Hx, PE or lab) the disturbance is caused by the direct physiological consequences of a medical condition
Delirium

- Delirium is most often caused by multiple factors. Generally it is a combination of pt vulnerability at hospital admission and noxious insults or precipitating factors. For example, a single dose of a sedative given to someone who is severely ill or cognitively impaired, can ppt delirium.

Causes of Delirium

- Medical conditions including neurological disorders, infections, metabolic alterations, and cardiac, pulmonary, endocrine, renal and neoplastic conditions
- Decreased mobility, including that assoc. with the use of medical devices (catheter, restraints, etc) greatly increases risk

Causes of Delirium

- Oxygen saturation monitoring has shown resp. failure is an increasing problem for the development of delirium
- Acute MI and CHF commonly present with delirium as well.
- Occult infection can be missed because elderly pts may
Causes of Delirium

**DRUGS**
- See JAGS 2012 Updated Beers Criteria
- Sedative hypnotics
- Narcotics
- Drugs of abuse including alcohol
- Anticholinergic drugs
- Psychotropic medications
- Cardiac drugs

Causes of Delirium

**DRUGS**
- GI drugs, particularly H2 blockers or PPI’s
- Antihistamines
- Polypharmacy

Risk Factors for Delirium

- Dementia is the leading risk factor for the development of delirium (approx 4x greater risk, and 2/3 of delirium occurs in those with dementia).
- Advanced age, chronic or severe illness, number and severity of underlying conditions, male, dehydration, sensory impairment, ETOH abuse or dependence, malnutrition, renal insufficiency
Risk Factors for Delirium

Other significant risk factors include:

- Recent surgery
- Admission to hospital, esp. ICU
- Emotional stress
- Chronic pain
- Intoxication or withdrawal from drugs of abuse

Incidence of Delirium

- 60-80% in ICU
- 30-50% post hip fracture repair
- 20-40% in nursing homes

Diagnosis of Delirium

- Based on a thorough cognitive assessment, a detailed hx from an informant close to the pt., and a comprehensive physical and neurological examination
- Delirium is missed about 70% of the time
- First task is to determine the change from baseline cognitive functioning
- Include change in behavior, sleep, concentration
Diagnosis of Delirium

- Often delirium is the only sign of a serious and potentially life-threatening underlying illness. Must look carefully at VS's, PE, Neurologic exam, lab testing
- The biggest challenge is usually differentiating delirium from dementia.

Management of Delirium

- Stop or decrease high risk medications, particularly narcotics, benzodiazepines, other psychotropic medications (especially if recently added or changed). This will treat about 40% of those with delirium
- Aggressively look for and treat any medical illnesses

Outcome of Delirium

- Mortality rate in Elderly with delirium is about 1/3
- Generally leads to an exacerbation of any preexisting dementia, or can transition into dementia for those vulnerable
- Symptoms may take 6 months to a year to completely remit
Heart Disease and Depression

- Depression is associated with an increased mortality and morbidity in patients with coronary disease. It is estimated those with depression post MI, have a 4x greater mortality in the first 6 months, when compared to those with similar heart damage who are not depressed.

Heart Disease and Depression

- In the 5 years following a CABG, those with depression at baseline, were about 3x less likely to survive
- The confusion regarding Type A and B personalities

Stroke and Depression

- Those with depression, are about 1.5 x more likely to have a stroke than those without.
Depression and CV Risk
- The CV risks of depression may be associated with chronic increases in sympathetic arousal, cortisol, serotonin or perhaps inflammatory response.
- Those with depression have significantly higher levels of inflammatory markers such as serum C-reactive protein and interleukin.

Post-Stroke Depression
- Patients with left hemisphere lesions, especially of the left prefrontal cortex, tend to have increased frequency and severity of depression. The greatest risk period from time of stroke appears to be the first two years, with peak prevalence of PSD occurring within the first three to six months.

Dx of Depression with Chronic Illness present
- Depression should be considered when the following are present: mood or somatic symptoms out of proportion to what is expected, poor response to standard medical treatment, poor motivation to participate in treatment and/or lack of engagement with care providers.