Managing Anxiety Disorders in a Geriatric Population

By
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A Day in Psychiatry 2017
Nov 8th, 2017- Kitchener

‘Anxiety weighs down the heart but a kind word cheers it up’ Pr 12.25
Managing Anxiety Disorders in a Geriatric Population
Dr. Cletus Okonkwo
Day in Psychiatry 2017

Declaration of Conflict of Interest:

I HAVE received an honorarium for working with the Pharmaceutical Company-Lundbeck.

I DO NOT INTEND to make therapeutic recommendations for medications that have not received regulatory approval (e.g. “off-label” use).
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- Otsuka
- Pfizer
- Janssen
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- Shire
- Sunovion
- KW Guardian Pharmacy
- HLS Therapeutics
- Allergan
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Mitigating Potential Conflicts of Interest:
I will specifically indicate when my therapeutic recommendations include Lundbeck pharmaceutical products and point out pharmaceutical alternatives as appropriate.
Learning Goals

1. Review diagnostic criteria, incidence and prevalence, natural history of anxiety disorders in a geriatric population.
2. The neuro-biochemistry of anxiety disorders
3. Discuss co-morbid conditions that mimic anxiety disorders
4. Present a rationale and treatment algorithm for treating anxiety disorders
5. Identify clinical resources that will aid family physicians in their treatment.
Pre Learning quiz

Answer True or False

1. Anxiety disorders are commoner in the elderly than adults.
2. All anxiety disorders have their onset from younger age.
   3. Relaxation training is less effective in the elderly.
   4. Cognitive therapy is more effective in the elderly.
5. There is an increased risk of falls with antidepressants in the elderly.
Case of “John Brown”

- 68 yrs old male married just retired as a counsellor, referred by FP for management of Anxiety in June 2015
- Current presentation precipitated by discontinuation of Venlafaxine XR 300 mg and Clonazepam 4 mg he has been on for years as advised by sleep specialist. He was then taking; Bupropion XL 300 mg, Escitalopram 10 mg, Desvenlafaxine 50 mg, Lorazepam 1 mg BID, Trazodone 50 mg daily, metoprolol, aspirin
- He described flu-like symptoms, diarrhoea, dizziness, panic attack symptoms, generalized anxiety and nervousness with anxiety state rated as 8-9/10 on most days. He also described depressive symptoms, emotional sensitivity, crying, anhedonia and death wishes with no active suicidal ideations or psychosis
- Background mental health history significant for MDD & Anxiety controlled with Clonazepam & Venlafaxine
- Background medical history significant for CAD with angioplasty, sleep apnea & restless leg syndrome
- Substance use was non contributory
- MSE: Pleasant, tired looking, tremulous with shaky voice and body, anxious and depressed, MoCA of 30/30.
- Assessment: Withdrawal symptoms; GAD with Panic, MDD, Sleep disorders, Hx of CAD.
- Mx: Investigations, elimination of polypharmacy, re-challenge with Venlafaxine & Clonazepam for both anxiety and sleep disorders.
Diagnostic Criteria, Incidence, Prevalence

• DSM-5 Criteria

• Anxiety Disorders – common features of:
  • Fear – emotional response to real or perceived imminent threat
  • Anxiety - anticipation of future threats - worry
  • Panic attacks - particular type of fear response
  • Avoidance behavior - reduce anxiety/ fear
  • Persistent, pervasive and mostly chronic - lasting > 6 months

• Mostly developed in childhood

• F:M  2:1

APA- 2013
Types of Anxiety Disorders

- Separation Anxiety Disorder
- Selective Mutism
- Specific Phobia
- Social Anxiety Disorder
- Panic Disorders
- Agoraphobia
- Generalized Anxiety Disorders
- Substance/Medication induced anxiety disorder
- Anxiety disorder due to another medical conditions

APA-2013
Types of Anxiety Disorders

- Other specified anxiety disorder
- Unspecified anxiety disorder
- OCD, BDD, Hoarding disorders, Trichotillomania, Excoriation, PTSD, Adjustment disorders have been moved to a different category in DSM-5
- We will discuss those Anxiety disorders relevant to the Senior’s mental health because of limitation of time.

APA 2013
Types of Anxiety disorders- shared & distinct features

- Worry/ Distress disorders
  - GAD, PTSD, Acute Stress Disorder
- Fear disorder
  - Panic and phobias (Agoraphobia, Social anxiety, Specific phobia)
- OCD

Blazer & steffens 2009
Diagnostic Criteria, Incidence, Prevalence

• Specific phobias
  • Marked fear or anxiety about a specific object or situation
  • Always provokes immediate fear or anxiety,
  • avoided or endured with immense fear or anxiety
  • Out of proportion to the actual danger, persistent lasting > 6mo
  • Cause clinically significant distress, not better explained by another disorder

• Animal, natural environment, blood-injection-injury, situational, other

• In elderly, fear of falling, natural environment are commoner

• Prevalence <9%

• Prevalence lower than in younger pop’n but one of commoner ones
Diagnostic Criteria, Incidence, Prevalence

• Social anxiety disorder
  • Marked fear or anxiety about 1 or >1 social situations-exposed to possible scrutiny by others
  • Fear of humiliating or embarrassing behavior leading to rejection/offending
  • Social situation almost always provokes fear or anxiety, avoided or endured with intense fear or anxiety, lasting > 6 mo, sociocultural out of context
  • Causes clinical significant distress, no better explained by other disorders

• 12 months prevalence- 2-5%
  • 1st onset in adulthood is rare,
  • Older popn express social anxiety at lower level but across broader range of situations-disability, health and cognitive impairment
Diagnostic Criteria, Incidence, Prevalence

• Panic disorders
  • Recurrent unexpected panic attacks
  • At least 1 of attacks has been followed by 1 month or > of 1 or both of
    • Anticipatory worry of additional attacks
    • Significant maladaptive changes in behavior related to the attacks.
  • Not attributable to physiologic effects of substances or medical condition, not better explained by another disorder

• 12 months prevalence- 0.7%
  • May be due to age related dampening of autonomic nervous system
  • Many have hybrid of limited symptoms and GAD, medical conditions.

APA- 2013
Diagnostic Criteria, Incidence, Prevalence

• Agoraphobia
  • Marked fear or anxiety about >2 of the following 5 criteria;
    • Public transport use, open spaces, enclosed spaces, crowds, outside of home alone
    • Fear/ avoids these: thinks that escape may be difficult or no help in panic
    • Always provoke fear or anxiety, avoided or endured with intense fear or anxiety
    • Out of proportion to the danger, lasting > 6 mo, clinical significant distress

• 12 months prevalence- 0.4%
  • In elderly- shops, lines and open spaces are more feared

APA- 2013
Diagnostic Criteria, Incidence, Prevalence

• Generalized anxiety disorder
  • Excessive anxiety and worrying, apprehensive expectation occurring more days than not, for at least 6 months
  • Finds it difficult to control the worry
  • The anxiety and worry are associated with > 3 of the following symptoms in last 6 mo
    • Restlessness, on edge or keyed up, fatigued, poor concentr’n, blank mind, irritability, tension
    • Causes significant distress-impairment in sociocultural, occupational functioning

• 12 months prevalence-2.9%
  • Older people- greater concern about well being of their family or physical health

APA- 2013
Diagnostic Criteria, Incidence, Prevalence

• Posttraumatic Stress Disorder
  • Exposure to actual or threatened death, serious injury or sexual violence
    • Directly experience, witnessing in person as it occurred, learning that it occurred to a close family member or a friend (violent or accidental), experiencing repeated or extreme exposure to aversive details of the traumatic event(s)
  • Presence of 1 or > intrusion symptoms associated with traumatic events after
    • Recurrent, involuntary & intrusive distressing memories of the traumatic events
    • Recurrent distressing dreams related to the traumatic event
    • Dissociative reactions-flashbacks
    • Intense or prolonged psychological distress, marked physiological reactions to cues
  • Persistent avoidance of stimuli associated with the traumatic event after
    • Avoidance of distressing memories or thoughts or external reminders
  • Negative alterations in cognitions & mood associated with the traumatic events after
    • Inability to remember an important aspect of the traumatic event-dissociative amnesia

APA-2013
Diagnostic Criteria, Incidence, Prevalence

• PTSD
  • Negative alterations in cognitions & mood associated with the traumatic events after
    • Inability to remember an important aspect of the traumatic event-dissociative amnesia
    • Persistent negative belief or expectations about oneself, others or the world
    • Persistent distorted cognitions about the cause or consequence of the traumatic events
    • Persistent negative emotional state, marked diminished interest or participation
    • Feeling of detachment or estrangement from others, inability to experience +ve emotions
  • Marked alterations in arousal and reactivity associated with traumatic events
    • Irritability and angry outbursts, reckless or self destructive behavior, hypervigilance,
      exaggerated startle response, concentration problems, sleep disturbances
  • Duration is more than 1 month
  • 12 months prevalence- 3.5 % USA, 1% rest of the world
  • Full threshold of PTSD is lower in elderly population
  • Elderly presents more with subthreshold but substantial clinical impairment
  • Delayed expressions(onset)

APA- 2013
Diagnostic Criteria, Incidence, Prevalence

• Obsessive-Compulsive Disorder
  • Presence of obsessions, compulsions or both
    • Obsession- recurrent & persistent thoughts, urges or images experienced as intrusive, unwanted and in most individuals caused anxiety or distress
    • Attempts to ignore, suppress such thoughts, urges or images or neutralize them
    • Compulsions- repetitive behaviors or mental acts that the individual feels driven to perform in response to obsession or rigidly applied rules
    • The behaviors or mental acts aimed at preventing or reducing anxiety or distress or preventing the dreaded situation- not connected in a realistic way
  • Obsessions or compulsions are time consuming
  • Not attributable to physiological effects of substances or another mental disorder
  • 12 months prevalence-1.1-1.8%

APA- 2013
Diagnostic Criteria, Incidence, Prevalence

- Hoarding disorder
  - Persistent difficulty discarding or parting with possessions regardless of actual value
  - Due to perceived need to save or distress associated with discarding them
  - Results in accumulation of possessions that clutter active living area
  - Causes clinically significant distress or impairment in socio-culturo-occupational function
  - Not attributable to another medical or mental disorder
- Point prevalence of 2%-6%
- 1st emerge around ages 11-15 years, M> F
- Almost 3X more prevalent in older adults (ages 55-94)

APA- 2013
Diagnostic Criteria, Incidence, Prevalence

• Incidence
  • From US National epidemiological survey on alcohol and related condition NESARC- Chou et al 2011
    • Generalized Anxiety disorder- 1.63%
    • Specific phobia- 1.35%
    • Panic disorder- 0.76%
    • Social Phobia- 0.5%

Dening & Thomas 2013
### Prevalence estimates of late-life anxiety disorders from epidemiological studies

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<th>Epidemiological studies in the elderly</th>
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<td>Prevalence</td>
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</table>

AMSTEL=Amsterdam study of the elderly; CCHS= Canadian community health survey; ECA= Epidemiologic catchment area; LASA=Longitudinal aging study Amsterdam; NCS-R= National comorbidity study replication; NMHWS= National mental health and well being study; N/A- Not applicable; Blazer & Steffens 2009
Case of “Carla Johnson”

• 76 yrs old married woman referred by her FP for management of ongoing anxiety and depressive symptoms

• Presented with panic symptoms, tremors, nausea and light-headedness. Symptoms worse upon waking up, affects appetite and sleep. Now complains of moodiness, crying spells, anhedonia. Reported that she loves life and current symptoms are frustrating her from enjoying her old age. No associated social anxiety, agoraphobia, OCD or psychosis. She will like medication review as she would not want to be admitted again. She has been on Lorazepam 0.5 mg BID for past 12 years, she also takes Valsartan and Pravastatin.

• Background mental health history of Anxiety disorder most of her life, became worst 3 yrs ago, was admitted into GAU for 5 weeks, treated with low dose of Paroxetine and Trazodone, did very well and by 3rd week was helping out in the unit. She had 3 sessions of ECT previously without benefit. She also has MCI. She did not tolerate a lot of antidepressants including; Sertraline, escitalopram, Paroxetine, Mirtazapine.

• Background medical history of Breast cancer, essential tremors and IBS.

• Substance use is non-contributory, uncomfortable around husband as he is not empathic towards her

• MSE: Pleasant, well groomed & looked her age. Coherent speech, anxious and tremulous, depressive symptoms, MoCA of 25/30.

• Assessment: GAD, Depressive symptoms, essential tremors, MCI, Breast cancer survivor, IBS

• Mx: Investigate-MRI Brain, TSH+ work up; Trial of medication failed, did well on 16 days hosp, relapsed upon D/C
2. Neuro-biochemistry of anxiety disorders

FMRI studies showed
- Lat & Med prefrontal cortex modulate amygdala and related limbic structures during effortful emotional regulation
- Imbalance btw PFC and amygdala structures creates pathological anxiety
- Anxious elderly people do not engage the PFC effectively during worrying suppression, failed to engage PFC during worrying reappraisal
- Engage subcortical structures-paraventricular nucleus & amygdala
- The inability of the regulatory areas to downgrade the worrying process may be related to higher treatment failures (cognitive restructuring) in elderly; they become more anxious when they attempt to reappraise worry
- Older GAD have reduced recruitment of the PFC attentional control regions consistent with Top-Down deficits in GAD
- OFC is associated with emotional decision making under certain condition-worrying

Blay 2012, Andreascu 2015
2. Neuro-biochemistry of anxiety disorders

- In homeostatic challenge, acute upregulated secretion of cortisol occurs to increase amount of energy available to respond to threat—HPA axis.

- Dysregulation of HPA—axis linked to stress & depression development

- Dysregulation of HPA-axis results from numerous system threats;
  - Chronic stress, diseased state, pathological ageing
  - Chronic hyperactivity or stress early in life may lead to blunted HPA

- HPA dysfxn in elderly may influence cognitive performance

- Elevated cortisol exposure may have chronic effects in the hippocampus & associated with poorer cognitive performance

- Higher basal cortisol level described in panic disorder & GAD

- Elderly elevated cortisol level reflects anxious state and can be attenuated by treatment (medication or CBT)

Bower 2015, Blay 2012,
2. Neuro-biochemistry of anxiety disorders

- Serotonin transporter genetic variation
  - Positive association btw thalamic 5HTT levels and anxiety
  - Reduced amygdala 5HTT binding associated with PTSD
  - GAD variability in SSRI treatment efficacy predicted by genetic variation in the serotonin transporter promoter in elderly.

- Neuropsychological
  - In elderly anxiety impairs; working memory, attention & problem solving skills
  - Ass with; poorer set shifting, immediate memory for words & semantic clustering use
  - Clinically – short term memory & executive function problems
  - Elevated anxiety symptoms moderated the effect of B-amyloid in cog decline.
    - Anxiety is an independent predictor of progression of MCI- Alz dementia & worrying alone has 5X risk factor of Alz dementia in those with MCI, relationship is bidirectional
  - Training in cognitive strategies such categorization may improve memory & learning

Bower 2015, Blazer 2012
3. Discuss co-morbid conditions that mimic anxiety disorders

- Depression- most common comorbidity, associated with poorer outcome
  - prolongs recovery to 24 months-Sergio 2012
  - 37% of anxious patients are depressed; 51% of MDD are anxious- Bower 2015
  - Early onset GAD more likely to develop depression- chronic course

- Chronic medical conditions-
  - DM, GI, UTIs, Thyroid diseases, Respiratory diseases, CVD, HTN, Insomnia, pheochromocytoma- Bower 2015
  - Others; arthritis, migraine, allergic conditions, pain, poorer interpersonal & physical functioning-Katzman 2014

- Cognitive impairment- MCI & dementia
  - Comorbid with depression higher risk of cognitive impairment
  - Higher chances of developing dementia

- Those with CVD associated with high mortality

- Substance/ medications effects

- Chronic mental disorders
  - Another anxiety disorder, MDD, BPAD, ADHD, SUD- Katzman 2014
  - They are sicker, poorer outcome, greater impairment, poorer QOL and increased suicide
4. Present a rationale and treatment algorithm for treating anxiety disorders

• Good treatment will always depend on the level of assessment

• There are few peculiar issues worthy to be considered in elderly
  • Avoidance & excessive anxiety may be difficult to be detected in elderly
  • They may discuss concerns rather than worries  Abou-Saleh 2011
  • Somatise their symptoms
  • Difficulty remembering symptoms

• Always obtain collateral information

• Asses functioning by asking about activities relevant to the individual

• Determine which came 1st, chronic medical illness/ meds or anxiety

• Late onset anxiety disorders are relatively unusual, therefore new cases must be thoroughly investigated to R/O comorbidities.  Katzman 2014
4. Present a rationale and treatment algorithm for treating anxiety disorders

- Management: pharmacotherapy, psychological & social milieu
- Meta-analyses suggest efficacy of both pharmacotherapy & psychotherapy  
  - Katzman 2014
- Psychological treatment
  - Relaxation training
  - CBT
  - Supportive therapy
  - Cognitive therapy
- Due to DMN & Top-Down deficits
  - Relaxation training, attentional-bias training may be more effective
  - Cognitive restructuring tends not to be as effective - Carmen 2015, Bower 2015
4. Present a rationale and treatment algorithm for treating anxiety disorders

- **CBT**
  - Effective option in anxiety symptoms when compared to waitlist & active control
  - Less effective in older patients
  - Enhanced by inclusion of learning & memory aids
  - New approaches: Modular CBT, MBCT, Acceptance & Commitment, exposure for PTSD, CBT for hoarding - Blay 2012

- **CBT – GAD & Panic disorders (RCT)**
- Exposure therapy with or without CBT - PTSD (case controlled)
- Benefits of CBT over supportive therapy > at 1 yr follow up

- **Others**
  - Simple psychoeducation is very effective - Bower 2015
  - Regular exercise reduces risk of developing anxiety (Case controlled) Katzman 2014
4. Present a rationale and treatment algorithm for treating anxiety disorders

• Pharmacotherapy
  • There are number of peculiar factors common in elderly
    • Due to changes in pharmacokinetics & pharmacodynamics- more susceptible to adverse drug effects, drug-drug interactions
    • Polypharmacy issue: 30% on at least 5 meds, 80% on at least 1 med, 50% on supplements
    • 45-60% on benzodiazepines, benzodiazepine prescriptions >> antidepressant prescript.
  • Safety concerns
    • 50% of available antidepressants associated with age related clearance issue
    • D-DI common due to polypharmacy
    • Psychotropics associated with risks of increased falls and fractures with RR as follows;
      • ADS-1.60; APS-1.59; AED-1.54; BZD-1.34
      • Risk of non vertebral #- 2.35 on SSRIs users-Rotterdam cohort study
      • BZD & interacting drugs further increase risk of hip # in elderly
  • Discontinue all un-necessary medications to reduce polypharmacy  

Katzman 2014
Medications with Health Canada-approved indications for anxiety and related disorders
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4. Present a rationale and treatment algorithm for treating anxiety disorders

• Pharmacotherapy
  • Generalized Anxiety Disorders
    • pregabalin, duloxetine, venlafaxine- RCTs
    • Citalopram- effective in 8/52 RCT and open studies
    • Escitalopram-may be, 1 RCT response rate no significant
    • Sertraline > effective than CBT at 1 yr follow up, as effective as Buspirone
  • Panic disorders
    • Paroxetine as effective as CBT, more effective than waitlist, results sustained after 6/52
    • Escitalopram & citalopram effective-small open trials
  • Others
    • Fluvoxamine –GAD, Panic disorder, OCD
    • Mirtazapine- PTSD, anxiolytic effect in MDD patients
4. Present a rationale and treatment algorithm for treating anxiety disorders

- Treatment
  - CVD patients with MDD- SSRIs associated with lower rates of all cause of mortality and readmissions Katzman 2014
  - Medications > effective than CBT in the acute phase Carmen 2015
  - Moderate efficacy of CBT in late life
  - CBT- preferred in late onset Panic disorder & agoraphobia
  - Paroxetine – early onset Panic disorder

- NNT
  - Antidepressants-5(imipramine-4; Venlafaxine-5; Paroxetine- 6)-Flynn 2003, Schmitt 2005
  - Pregabalin- 5

- NNH
  - Paroxetine-143-200
4. Present a rationale and treatment algorithm for treating anxiety disorders

• Algorithm
  • Late onset Anxiety disorders infrequent
    • Investigate and R/O comorbidities
    • Clean out Polypharmacy including unnecessary nutrients & health products
  • Psychoeducation
    • Educate them (patients, family, carers) frequently- use their terminology
    • Frequent follow up
  • Psychological treatment
    • Relaxation training, exercise, modular CBT, bibliotherapy
  • Pharmacotherapy
    • Avoid: confusiogenic medications, Benzodiazepines
    • Start medication at lowest dose, increase every 3 weeks
    • Consider: Pregabalin, Paroxetine, Duloxetine, Venlafaxine, Citalopram, Quetiapine
Post learning quiz

Answer True or False

1. Anxiety disorders increase risk of cognitive impairment
2. Most common comorbidity of anxiety disorders is depression
3. Anxiety disorders comorbidity with CVD lowers mortality
4. Antidepressants have no effect in those with CVD
5. Pregabalin has no effect in management of anxiety disorders in elderly
5. Identify clinical resources that will aid family physicians in their treatment.

• CANMAT- Katzman 2014

• Assessment instruments  Dening et al 2013
  • The Short Anxiety Screening Test- 10 items self report. Sinoff et al 1999
  • Geriatric Anxiety Inventory- 20 items self report. Pachana 2007- Copyright
  • Geriatric Anxiety Scale- Segal et al 2010
Screening questions for specific anxiety and related disorders

CANMAT-Katzman 2014

PANIC DISORDER – MACSCREEN [29,30]

• Do you have sudden episodes/spells/attacks of intense fear or discomfort that are unexpected or out of the blue? If you answered “YES” then continue
• Have you had more than one of these attacks?
• Does the worst part of these attacks usually peak within several minutes?
• Have you ever had one of these attacks and spent the next month or more living in fear of having another attack or worrying about the consequences of the attack?
SAD (Based on Mini-SPIN [28])

• Does fear of embarrassment cause you to avoid doing things or speaking to people?
• Do you avoid activities in which you are the center of attention?
• Is being embarrassed or looking stupid among your worst fears?
GAD [31]

• During the past 4 weeks, have you been bothered by feeling worried, tense, or anxious most of the time?
• Are you frequently tense, irritable, and having trouble sleeping?

OCD – MACSCREEN [29,30]
OBSESSIONS:

• Are you bothered by repeated and unwanted thoughts of any of the following types:
  ○ Thoughts of hurting someone else
  ○ Sexual thoughts
  ○ Excessive concern about contamination/germs/disease
  ○ Preoccupation with doubts (“what if” questions) or an inability to make decisions
  ○ Mental rituals (e.g., counting, praying, repeating)
  ○ Other unwanted intrusive thoughts

• If you answered “YES” to any of the above... Do you have trouble resisting these thoughts, images, or impulses when they come into your mind?
COMPULSIONS:

• Do you feel driven to perform certain actions or habits over and over again, or in a certain way, or until it feels just right? Such as:
  ○ Washing, cleaning
  ○ Checking (e.g., doors, locks, appliances)
  ○ Ordering/arranging
  ○ Repeating (e.g., counting, touching, praying)
  ○ Hoarding/collecting/saving
• If you answered “YES” to any of the above... Do you have trouble resisting the urge to do these things?
PTSD – MACSCREEN [29,30]

• Have you experienced or seen a life-threatening or traumatic event such as a rape, accident, someone badly hurt or killed, assault, natural or man-made disaster, war, or torture? If you answered “YES” then continue
• Do you re-experience the event in disturbing (upsetting) ways such as dreams, intrusive memories, flashbacks, or physical reactions to situations that remind you of the event?
# Short Anxiety Screening Test (SAST)

<table>
<thead>
<tr>
<th>Questions</th>
<th>Rarely or never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you feel keyed up, on edge?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>2. Do you feel that something terrible is going to happen?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>3. Are you worrying about your present state?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>4. Do you feel you have control of your life?</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5. Can you relax?</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6. Do you suffer from back pain, neck pain and headache?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>7. Do you sweat a lot or suffer from palitations?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>8. Have you been irritable?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>9. Do you sleep well?</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>10. Do you suffer from dizziness or faintness?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Key:**
- Score >24 = positive test result
- Score 22 - 23 = Borderline test results
Geriatric Anxiety Scale (GAS) – Version 2.0

Below is a list of common symptoms of anxiety or stress. Please read each item in the list carefully. Indicate how often you have experienced each symptom during the PAST WEEK, INCLUDING TODAY by checking under the corresponding answer.

<table>
<thead>
<tr>
<th></th>
<th>Not at all (0)</th>
<th>Sometimes (1)</th>
<th>Most of the time (2)</th>
<th>All of the time (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>My heart raced or beat strongly.</td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
<td>My breath was short.</td>
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<tr>
<td>3.</td>
<td>I had an upset stomach.</td>
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<td>4.</td>
<td>I felt like things were not real or like I was outside of myself.</td>
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<tr>
<td>5.</td>
<td>I felt like I was losing control.</td>
<td></td>
<td></td>
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<tr>
<td>6.</td>
<td>I was afraid of being judged by others.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>7.</td>
<td>I was afraid of being humiliated or embarrassed.</td>
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<tr>
<td>8.</td>
<td>I had difficulty falling asleep.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>I had difficulty staying asleep.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>I was irritable.</td>
<td></td>
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<tr>
<td>11.</td>
<td>I had outbursts of anger.</td>
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<tr>
<td>12.</td>
<td>I had difficulty concentrating.</td>
<td></td>
<td></td>
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<tr>
<td>13.</td>
<td>I was easily startled or upset.</td>
<td></td>
<td></td>
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<tr>
<td>14.</td>
<td>I was less interested in doing something I typically enjoy.</td>
<td></td>
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<tr>
<td>15.</td>
<td>I felt detached or isolated from others.</td>
<td></td>
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<tr>
<td>16.</td>
<td>I felt like I was in a daze.</td>
<td></td>
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<tr>
<td>17.</td>
<td>I had a hard time sitting still.</td>
<td></td>
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<tr>
<td>18.</td>
<td>I worried too much.</td>
<td></td>
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<tr>
<td>19.</td>
<td>I could not control my worry.</td>
<td></td>
<td></td>
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<tr>
<td>20.</td>
<td>I felt restless, keyed up, or on edge.</td>
<td></td>
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<tr>
<td>22.</td>
<td>My muscles were tense.</td>
<td></td>
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<tr>
<td>23.</td>
<td>I had back pain, neck pain, or muscle cramps.</td>
<td></td>
<td></td>
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<tr>
<td>24.</td>
<td>I felt like I had no control over my life.</td>
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<tr>
<td>25.</td>
<td>I felt like something terrible was going to happen to me.</td>
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<td></td>
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<tr>
<td>26.</td>
<td>I was concerned about my finances.</td>
<td></td>
<td></td>
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<tr>
<td>27.</td>
<td>I was concerned about my health.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>28.</td>
<td>I was concerned about my children.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>29.</td>
<td>I was afraid of dying.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>30.</td>
<td>I was afraid of becoming a burden to my family or children.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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