Post – Stroke Fatigue and Depression

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Disclosure

- Nothing to disclose.

Objectives

- Understand the prevalence, roadblocks and importance of identifying fatigue and depression in post stroke
- Understand and be able to identify the risk factors and signs and symptoms of fatigue and depression
- Become familiar with the assessment tools available to help identify PSD
- Understand the benefits of rehabilitation, physical activity in prevention of fatigue and depression in the patient post stroke

Post-Stroke Fatigue

- Is common with a prevalence rate from 35% to 92%
- Screening of fatigue and depression is vital
- Exertional fatigue
  - Is related to cardiorespiratory and skeletal muscle fitness
- Chronic fatigue
  - Can be related to depression

Stroke Survivors:

- Often become deconditioned and predisposed to a sedentary lifestyle
- Are at increased risk for falls
- Are at risk for recurrent stroke and other CVDs
- 40% have difficulties with basic self-care 6 months after stroke (e.g., dressing and feeding)
- 30% of stroke survivors report participation restrictions (e.g., difficulty with autonomy, engagement, or fulfilling societal roles) even at 4 years post-stroke

Why am I so tired?

- Experience less energy than prior to stroke
- Using your energy in different ways
- Feel tired due to emotional changes
- Feel tired due to depression

What is Post-Stroke Depression?

One of the most common complications after stroke

Emotional health is just as important as physical health

- Post-stroke depression is described as a feeling of hopelessness that interferes with functioning and quality of life.

- If not treated and managed appropriately, post stroke depression can slow down recovery.
- Depression can set in weeks, months, or even years after the stroke.

http://www.stroke.org/we-can-help/survivors/stroke-recovery/post-stroke-conditions/emotional/depression

Who is affected with Post-Stroke Depression? (PSD)

- 1 of every 3 post-stroke patients
- Associated with poor functional outcomes and higher mortality
- Largely under-reported
- If not treated PSD may affect:
  - Rehabilitation efforts
  - Quality of Life
  - Recovery overall
  - Caregiver health
  - Survival
  - Health Care System

Effect of Post-Stroke Depression on Recovery

- Depression may jeopardize a patient's ability to meet functional goals and to reintegrate into society.
- The incidence of complications (e.g., skin breakdown, urinary tract infections), hospital length of stay, and medical costs expenses may all increase because of depression.
- Post-Stroke Depression has been linked with higher mortality rate.

Risk Factors for Post-Stroke Depression

- Age 60 or younger
- Divorced
- Alcoholism
- Non-fluent aphasia
- Major motor or cognitive deficit
- Nursing home / rehab placement
- Lack of social support (family, friends)
- Anxiety

Predictors

Most consistent predictors

- Physical disability
- Stroke severity
- Depression before stroke
- Cognitive impairment
- Lack of family or social support after stroke
- Anxiety after stroke

No consistent association found.

- Older age
- Female
- Diabetes mellitus
- Stroke subtypes
- Education level
- Living alone
- Previous stroke

Pathophysiology of Post-Stroke Depression

- **Poorly understood**
- Complex and involves a combination of these factors:
  - Biological components
    - Respond better to pharmacological therapy
  - Psychosocial components
    - Respond more favorably to psychotherapy and social support interventions
- **Types of PSD**
  - Major Depressive Disorder
  - Dysthymic Reactive Depression

- Further research is needed to develop a better understanding to help develop targeted interventions for prevention and treatment.

Signs and Symptoms of Post Stroke Depression

- Persistent sad, anxious or empty feelings
- Significant lack of energy/Lack of motivation
- Social withdrawal
- Problems concentrating/remembering details
- Difficulty finding enjoyment in anything
- Sleep disturbances - Fatigue
- Irritability
- Increase or decrease in appetite and eating patterns.
- Feelings of helplessness, hopelessness and/or worthlessness
- Aches, pains, HA, and digestive problems that do not ease with treatment
- Suicidal thoughts

Why does PSD often go undiagnosed?

- Diagnosis of PSD is challenging in the acute and chronic aftermath of stroke
- Stroke symptoms can mask depression symptoms making it hard to distinguish the root of the impairments a patient is experiencing.

Can Post-Stroke Fatigue and/or Depression Be Treated?

Screening tools

The most optimal screening tool for PSD remains unclear.

- CES-D – Center of Epidemiological Studies-Depression Scale
  - 20 item questionnaire
  - Highest positive predictive value and highest utility for screening
- HDRS - Hamilton Depression Rating Scale
  - 21 item questionnaire

  (CES-D and HDRS – high sensitivity but, not feasible in clinical practice)
- **PHQ-9** - Patient Health Questionnaire
  - 9 questions
  - Objectifies degree of depression severity
- **PHQ-2** – Patient Health Questionnaire
  - 2 questions
  - Inquires about the frequency of depressed mood over previous 2 weeks.
  - Includes the first two items of PHQ-9
- GDS 15 – Geriatric Depression Scale
- Montgomery Asberg Depression Rating Scale
- HDRS – Hospital Anxiety and Depression Scale (HADS-Total, HADS-D) – high sensitivity
- Beck Depression Inventory
- CGI-S – Clinical Global Impression Severity Scale
- SDSS – Signs of Depression Scale

- Fatigue severity scales
  - Modified Fatigue Impact scale
  - Chalder Fatigue Scale

Timing of Evaluation

- Evaluation should occur the first month following a stroke
- Patients should be monitored at regular intervals, depending on risk factors and presenting symptoms
- Families should be included in the evaluation process

Onset of Post-Stroke Depression

- Occurs in all phases of stroke recovery
- Peak incidence and severity of depression occurs between 6 months and 2 years after stroke.

Treatments

- Treatments that have been proven to be effective include:
  - Medications - Antidepressants
  - Mental Health Therapy
  - Neuromodulation – rTMS, ECT, VNS
  - Psychosocial Interventions
    - Cognitive behavioral therapy
  - Alternative therapies

Medications

- Selective Serotonin Reuptake Inhibitors (SSRIs)
  - First line medication choice – Prozac, Zolof, Paxil
- Tricyclic and Teracyclic Antidepressants
    - Elavil, Pamelor, Ludiomil
- Novel Antidepressants
    - Wellbutrin, Effexor, Remeron
- MAOI Inhibitors
    - Nardil, Marplan, Parnate

Behavioral Therapy

- Cognitive Therapy
  - Thoughts lead to moods
- Problem-solving therapy
  - Mental health professionals meet with stroke survivors to facilitate awareness of problems and help develop solutions
- Psychosocial behavioral intervention
  - Stroke survivors are provided with opportunities to interact with educational materials and interventionists

Neuromodulation therapy

- These include:
  - Repetitive Magnetic Stimulation (rTMS)
  - Electroconvulsive therapy (ECT)
  - Vagus Nerve Stimulation (VNS).

Alternative Therapy

- Utilizing pre-existing coping techniques
- Repetitive transcranial magnetic stimulation
- Music therapy
- Acupuncture

Prevention

- Pharmacotherapy
- Psychosocial interventions

Healthcare Provider Roles

- A multidisciplinary health team is essential in PSD
  - Screening
  - Diagnosis
  - Treatment
  - Prevention of potential complications
- RN plays an important role
  - Identifying risk factors
  - Effectively screening patients
  - Educating patients and their families on treatment options to combat PSD

Other Considerations

- A post-stroke patient may need:
  - Spiritual support
  - Counseling with a provider who has experience with the diagnoses
  - Support groups
- Providing resources
  - Printed materials
  - Websites
  - Organizations that would be helpful for patient and/or family members
- Assess the patient's and family's perception of the diagnoses, and coping mechanisms

Tips to Live with Post-Stroke Fatigue and Depression

- Communication
- Improve nutrition
- Attend a stroke support group
- Set realistic goals and prioritize
- Practice stress and anxiety management techniques
- Be patient with yourself and loved ones.
- Stay as active as possible
- Get out into the community
- Minimize or eliminate alcohol consumption and smoking

Conclusions

- Fatigue and Depression are common after stroke
- Symptoms most frequently develop in the first months to year
- Pathophysiology is poorly understood
  - Psychosocial factors
  - Biological factors
    - Genetic susceptibility, inflammation, alteration in neurotrophic factors, disruption of neural networks, alteration in serotonergic, noradrenergic and dopaminergic pathways
- Most consistent predictors
  - Physical disability, stroke severity, depression before stroke, and cognitive impairment
- Patients with Depression – higher healthcare use, poorer functional outcomes and QOL and higher mortality

Desired Outcome

- An empowered patient able to participate in their recovery process!!


Thank You !

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