POST-STROKE EMOTIONAL AND BEHAVIORAL CHANGES: TREATMENT AND CARE CONSIDERATIONS

PRESENTER

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OBJECTIVES

- Review the short-term and long-term emotional and behavioral changes after stroke
- Identify various therapeutic approaches to supporting stroke patients and their loved ones in the adjustment process

POST-STROKE EMOTIONAL & BEHAVIORAL CHANGES

- Common types of changes noted:
  - Post-stroke depression (PSD),
  - Post-stroke anxiety (PSA),
  - Post-stroke emotional incontinence (PSEI),
  - Post-stroke anger proneness (PSAP),
  - Post-stroke fatigue (PSF)
  - According to the American Stroke Association, Major Depressive Disorder symptoms occur in up to 25% of patients, 30% of patients experience some depressive symptoms
POST-STROKE EMOTIONAL & BEHAVIORAL CHANGES

- The quality of life for the patient and the caregiver are significantly affected by mood and behavioral change after stroke
  - relationships,
  - participation in therapies,
  - functional abilities,
  - recovery,
  - return to work,
  - mortality

- Affects stroke patients in all age groups

POST-STROKE DEPRESSION (PSD)

- Depressive Symptomology (DSM5)
  - Persistent, sad, anxious or “empty” mood
  - Hopelessness/pessimism
  - Feelings of guilt, worthlessness, hopelessness*
  - Loss of interest/pleasure*
  - Decreased energy/fatigue, feeling “slowed down” *
  - Difficulty concentrating, remembering, making decisions*
  - Restlessness/irritability
  - Sleep difficulties *
  - Changes in appetite
  - Thoughts of death*
    - * may be overlap due to physical effects of stroke
POST-STROKE DEPRESSION (PSD)

• PSD may affect up to 67% of stroke patients
  • 40% will develop symptoms within 3 months
  • 30% of non-depressed patients will become depressed upon discharge from the hospital
  • After 6 months, a majority of the patients with PSD will continue to have depressive symptomology
  • More commonly reported in women than in men (2x more likely, however research notes that there may be a response bias)
  • Can last up to 5 years

POST-STROKE DEPRESSION (PSD)

• Affects those with severe strokes, early or late physical disability
  • Also seen with TIAs and minor strokes
• Alterations in neurotransmitters and neural circuits may be a factor
  • Variable research findings regarding location of lesions and prevalence of depression
• Social and Psychological stressors caused as a result of stroke can contribute to depression as well
  • Interestingly, those with anosognosia still develop symptoms of post-stroke depression
POST-STROKE DEPRESSION (PSD)

• Diagnosis
  • Difficult to reliably diagnosis
  • American Stroke Association found that it is under-diagnosed in 50-80% of cases
  • Differential diagnosis: Is patient depression a secondary effect of caregivers emotional distress?
    • Interference in one’s own ability to participate in valued activities

• Assessment
  • Clinical interview, collateral information, standardized screening measures (observations and self report)
  • Beck Depression Inventory, PHQ2/PHQ9, Visual Analogue Mood Scale, Aphasic Depression Rating Scale

POST-STROKE DEPRESSION (PSD)

• Impact of PSD
  • Poor functional recovery and social outcomes
  • Reduced quality of life and rehab treatment efficacy
  • Increased cognitive impairment and mortality
    • 3.4 times more likely to die during a 10 year period

• Predictors
  • Premorbid history of depression
  • Personality and coping skill
  • Inadequate social support (esp. significant other)
  • Level of disability
  • Age <68 years
POST-STROKE ANXIETY (PSA)

• Excessive anxiousness or worry
• Restless, decreased energy, poor concentration, irritation, nervous tension, insomnia
• Higher in the hospital setting (up to 13%) compared to community setting (1-2%)
• No association with lesion location, age, gender
• When combined with PSD, ADL function is lower than those with just PSA at 1 and 2 year follow up

POST-STROKE EMOTIONAL INCONTINENCE (PSEI)

• Aka: pseudobulbar affect (PBA), emotional lability, involuntary emotional expression disorder, or pathologic lability
  • Involuntary (pathologic) laughing or crying without subjective emotional feelings
  • Uncontrollable and spontaneous
    • May lead to embarrassment, frustration and anger
    • May lead to isolation and avoidance
  • Uncontrollable crying for no reasons is commonly confused with depression, but it is not depression
• Neurological aspects:
  • Brain stem and cerebellar damage results in disinhibition of facial and vocal behavioral expressions of emotions
  • Almost always associated with dysphagia, dysphonia, dysarthria, and impaired facial and tongue movements
POST-STROKE EMOTIONAL INCONTINENCE (PSEI)

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  - Involuntary (pathologic) laughing or crying
    - Uncontrollable crying for no reasons is commonly confused with depression, but it is not depression
  - Uncontrollable and spontaneous
    - May lead to self-blame/embarrassment, self-criticism, frustration/anger, hopelessness and thoughts of death
    - May lead to isolation and avoidance
- May affect 6-34% of stroke patients; up to 11% at one year post-stroke

POST-STROKE EMOTIONAL INCONTINENCE (PSEI)

- Diagnosis:
  - Difficulty to differentiate between psychological and physiological depression (lack of initiation, decreased responsiveness, blunted affect)
  - Neurotransmitters thought to play a significant role
  - May also see PSEI with ALS and MS patients
- Prognosis:
  - Severe motor and neurological dysfunction, subcortical / brainstem lesions were a factor in early recovery
  - Functional status, low social support a factor 3 months post-stroke
- Tips:
  - Honesty with others about symptoms and inability to control
  - Distraction and relaxation
POST-STROKE AGGRESSION AND ANGER PRONENESS (PSAP)

- Physical aggression
  - hitting, kicking, biting, grabbing, pushing, throwing objects
- Verbal aggression
  - cursing, screaming, making noises, hostile muttering
- Usually present in the acute stages after stroke
  - May continue with irritability, impulsiveness, hostility, limited tolerance
- May be easily angered at minor things
- Up to 35% in the acute stage and 32% in the subacute stage

POST-STROKE AGGRESSION AND ANGER PRONENESS (PSAP)

- Associated with PSEI vs PSD
- Lesion location / causes similar to PSEI
- Risk factors include
  - motor dysfunction
  - severe neurological dysfunction
  - Dysarthria
  - high NIH stroke scale scores
  - prior stroke
  - premorbid mental health history (depression and personality traits)
POST-STROKE FATIGUE (PSF)

• Symptoms:
  • Weariness, lack of energy, aversion to effort
  • Ensure to differentiate between physical exertion and mental fatigue
  • Chronic inflammation and altered immune response after stroke may also be a factor

• Medical comorbidities
  • HTN, depression, decreased appetite, sleep disturbance, pain, prior history of fatigue

POST-STROKE FATIGUE (PSF)

• These patients usually are not depressed (experiencing feelings of worthlessness, hopelessness) although depression may be a result of prolonged fatigue

• Cognitive impairments may include attention deficits, slow mental processing, memory dysfunction

• 25% - 75% improves with time
THERAPEUTIC INTERVENTIONS

• Medications
• Psychotherapy
  • Not much research available to support efficacy in early course of emotional changes due to stroke
  • Tend to focus more on education of signs and symptoms, and ways to plan for managing these
  • Individual and Group approaches focus on grief and loss, adjustment, socialization, problem solving, improving quality of life, emotion regulation, changing negative thinking styles, changing unhealthy behaviors
  • For patients and family members

THERAPEUTIC INTERVENTIONS

• Support Groups
  • Stroke survivors
  • Caregivers
• Tips as noted by the National Stroke Association closely parallel the noted impacts of PSD:
  • “make the most of rehab; the more you recover, the better you will feel”
  • “spend time with family and friends
  • “maintain your quality of life by staying active and doing things you enjoy”
  • “seek help soon after you note symptoms”
GRIEF AND LOSS OF …

- Prior roles (workplace, familial, relationship, friendships)
- Career
- Carefree travel (Spontaneity)
- Retirement plans
- Caregiver status

PROCESS OF ADJUSTMENT AND REHABILITATION

- Recognize changes and their meaning
- Grieve losses
- Take responsibility
- Recognize strengths and weaknesses
- Set short-term goals
- Move on towards long-term goals

Limited Control, Responsibility and Independence to Increased Control, Responsibility and Independence
ADJUSTMENT AND THE NEW NORMAL

New Normal

– The current state of being after some dramatic change has transpired
– What replaces the expected, usual, typical state after an event occurs
– The new normal encourages one to deal with current situations rather than focusing on what could have been

ADJUSTMENT AND THE NEW NORMAL

• Reclaiming order or “new normal” development is associated with positive feelings about self
• Acceptance of “new normal”:
  – A research study on the role of acceptance found that increased acceptance scores were predictive of:
    • Lower levels of pain catastrophizing
    • Better cognitive, emotional, social and occupational functioning
    • Play a large role in mental and physical health related quality of life
• Over time, people are able to regain a sense that they have choices about the way they manage their life
  – Although a chronic illness can be unpredictable, a sense of choice can lead to a sense of living, not just existing
SOCIAL CONSIDERATIONS

- When socially isolated, patients are at higher risk
  - recurrent strokes, MI, increased mortality, depression,
- Social isolation, inability to return to work and reduced support (social function, networks, participation) leads to slower functional recovery and increased risk of depression

PSYCHOSOCIAL ISSUES OF REHABILITATION

**Survival Struggle:** Physical Existence \(\rightarrow\) Emotional Existence \(\rightarrow\) Social Existence

**Ideations of Death:** Death Wish \(\rightarrow\) Suicidal Consideration \(\rightarrow\) Restatement of Life Goals/New Normal

**Thought Disturbance:** Disassociations/sense of wholeness \(\rightarrow\) Paranoia/Trust \(\rightarrow\) Fragmentation/Reintegration

**Mourning:** Loss of ability \(\rightarrow\) Loss of Function \(\rightarrow\) Acknowledgement of Limitations

**Quest for Meaning of Injury:** Punishment/Omen \(\rightarrow\) Reevaluation \(\rightarrow\) Integration of Energy

**Role Relationships:** Regression \(\rightarrow\) Dependence/Independence \(\rightarrow\) Redefinition of Relationships

**Body Image:** Fear of Revulsion \(\rightarrow\) Fear of Rejection \(\rightarrow\) Tolerance of Altered Body

**Intimacy:** Fear of Abandonment \(\rightarrow\) Exploration of Present Sexual Expression \(\rightarrow\) Restatement of Lovability

**Vocational Options:** Unemployability \(\rightarrow\) Loss of Provider Role \(\rightarrow\) Reevaluation of Work Role

Krueger (1984), Emotional Rehabilitation of Physical Trauma and Disability
QUALITY OF LIFE AND VALUES

Acceptance: to be open to and accepting of myself, others, life, etc.
Adventure: to be adventurous; to actively seek, create, or explore novel or stimulating experiences
Assertiveness: to respectfully stand up for my rights and request what I want
Authenticity: to be authentic, genuine, real; to be true to myself
Beauty: to appreciate, create, nurture or cultivate beauty in myself, others, the environment, etc.
Caring: to be caring towards myself, others, the environment, etc.
Challenge: to keep challenging myself to grow, learn, improve
Compassion: to act with kindness towards those who are suffering
Connection: to engage fully in whatever I am doing, and be fully present with others
Contribution: to contribute, help, assist, or make a positive difference to myself or others
Conformity: to be respectful and obedient of rules and obligations
Cooperation: to be cooperative and collaborative with others
Courage: to be courageous or brave; to persist in the face of fear, threat, or difficulty
QUALITY OF LIFE AND VALUES

Creativity: to be creative or innovative
Curiosity: to be curious, open-minded and interested; to explore and discover
Encouragement: to encourage and reward behavior that I value in myself or others
Equality: to treat others as equal to myself, and vice-versa
Excitement: to seek, create and engage in activities that are exciting, stimulating or thrilling
Fairness: to be fair to myself or others
Fitness: to maintain or improve my fitness; to look after my physical and mental health and wellbeing
Flexibility: to adjust and adapt readily to changing circumstances
Freedom: to live freely; to choose how I live and behave, or help others do likewise
Friendliness: to be friendly, companionable, or agreeable towards others
Forgiveness: to be forgiving towards myself or others
Fun: to be fun-loving; to seek, create, and engage in fun-filled activities

QUALITY OF LIFE AND VALUES

Generosity: to be generous, sharing and giving, to myself or others
Gratitude: to be grateful for and appreciative of the positive aspects of myself, others and life
Honesty: to be honest, truthful, and sincere with myself and others
Humor: to see and appreciate the humorous side of life
Humility: to be humble or modest; to let my achievements speak for themselves
Industry: to be industrious, hard-working, dedicated
Independence: to be self-supportive, and choose my own way of doing things
Intimacy: to open up, reveal, and share myself – emotionally or physically – in my close personal relationships
Justice: to uphold justice and fairness
Kindness: to be kind, compassionate, considerate, nurturing or caring towards myself or others
Love: to act lovingly or affectionately towards myself or others
Mindfulness: to be conscious of, open to, and curious about my here-and-now experience
Order: to be orderly and organized
QUALITY OF LIFE AND VALUES

Open-mindedness: to think things through, see things from other’s points of view, and weigh evidence fairly

Patience: to wait calmly for what I want

Persistence: to continue resolutely, despite problems or difficulties

Pleasure: to create and give pleasure to myself or others

Power: to strongly influence or wield authority over others, e.g. taking charge, leading, organizing

Reciprocity: to build relationships in which there is a fair balance of giving and taking

Respect: to be respectful towards myself or others; to be polite, considerate and show positive regard

Responsibility: to be responsible and accountable for my actions

Romance: to be romantic; to display and express love or strong affection

Safety: to secure, protect, or ensure safety of myself or others

Self-awareness: to be aware of my own thoughts, feelings and actions

QUALITY OF LIFE AND VALUES

Self-care: to look after my health and wellbeing, and get my needs met

Self-development: to keep growing, advancing or improving in knowledge, skills, character, or life experience

Self-control: to act in accordance with my own ideals

Sensuality: to create, explore and enjoy experiences that stimulate the five senses

Sexuality: to explore or express my sexuality

Spirituality: to connect with things bigger than myself

Skillfulness: to continually practice and improve my skills, and apply myself fully when using them

Supportiveness: to be supportive, helpful, encouraging, and available to myself or others

Trust: to be trustworthy; to be loyal, faithful, sincere, and reliable
EMOTIONAL REGULATION

- Emotions are necessary for successful social interactions and participation in social endeavors.
- “The ability to recognize and understand one’s own emotions, as well as modulate the extent of emotional arousal that is experienced. Successful emotion regulation allows monitoring and evaluation of emotions and highlights awareness of emotions as critical to this process.” (Cooper et al., 2016)

CHANGING NEGATIVE THINKING STYLES

- All or nothing thinking: Sometimes called black and white thinking. If I'm not perfect I have failed. Either I do it right or not at all.
- Over-generalising: “everything is always rubbish,” “nothing good ever happens.”
- Mental filter: Only paying attention to certain types of evidence. Noticing our failures but not seeing our successes.
- Disqualifying the positive: Discounting the good things that have happened or that you have done for some reason or another. That doesn’t count.
- Jumping to conclusions: There are two key types of jumping to conclusions: blind reading (imagining we know what others are thinking). Fortune telling (predicting the future).
- Magnification (catastrophising) & minimisation: Blowing things out of proportion (catastrophising), or inappropriately thinking something to make it seem less important.
CHANGING NEGATIVE THINKING STYLES

**Emotional reasoning**
Assuming that because we feel a certain way what we think must be true.
*I feel embarrassed so I must be an idiot*

**Labeling**
Assigning labels to ourselves or other people
*I'm a loser
I'm completely useless
They're such an idiot*

**Should must**
Using critical words like 'should', 'must', or 'ought' can make us feel guilty, or like we have already failed.
*If we apply 'shoulds' to other people the result is often frustration*

**Personalisation**
Blaming yourself or taking responsibility for something that wasn't completely your fault. Conversely, blaming other people for something that was your fault.
*"this is my fault"*

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CHANGING UNHEALTHY BEHAVIORS

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**Adaptive Thinking**
Activity Pacing

**Socialization and Recreation**

**Expression of Emotions**
"I feel angry"

**Appropriate Use of Medications**

**Physical Pain Management Strategies**

**Pain Behavior Reduction**

**Focus Shifting**

**Sleep Improvement**

**Relaxation**

**Movement**

**Mood Improvement**

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[CENTRACARE Health]
REFERENCES


QUESTIONS?