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Suicide Attempts Following Traumatic Brain Injury

From Risk Identification to Prevention

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- Identify psychiatric and psychological issues associated with suicidal behavior following TBI
- Identify risk factors related to suicide and TBI
- Establish understanding of multi-axial approach to risk assessment
- Identify methods to reduce risk and address suicidality

Learning Objectives

Sam's Story: Suicide Attempts following Brain Injury

- 39 y.o. convenience store owner beaten in a robbery
- Severe TBI with bilateral frontal and temporal lobe injuries
- Coma length of 2 days
- Seizure disorder, severe depression, anxiety, panic attacks/PTSD, memory loss and impaired thinking/planning ability
- Anger, rage events. Constant thoughts of revenge and retribution
- Loss of functional abilities
- Initiated substance use/abuse daily
- Social withdrawal and avoidance
- First suicide attempt 5 months after attack

- Depression over loss of self and functional changes
- Despair, feelings of worthlessness
- Previous attempts, pre and post TBI
- Prior ideation with/without plan
- Psychiatric history or exacerbation of pre-existing illness
- Emergence of psychiatric symptoms post TBI
- Psychosocial stressors related to TBI
- Impulsive behaviours, executive dysfunction
- Thinking, planning, decision making problems
- Mood state problems related to TBI

Factors Related to Suicide Attempts by Individuals with TBI

- 17% of the individuals with TBI report suicidal thoughts, plans and attempts in a five year post injury period (Teasdale, 2000)
- Majority of the individuals with suicidal thoughts/plans/attempts are male, with ages 25-35 at the greatest risk. Males 65+ are the number two risk group
- Hopelessness is a key factor in suicidality
- Comorbidity with a psychiatric diagnosis or substance abuse problem was a common factor
- Role of identity crisis and social disruption (Klonoff and Tate, 1995)
- Risk increases in the first 15 year period post-injury

Prevalence of Suicide Attempt Following Brain Injury

- Social Withdrawal (Sugarman, 1999)
- Executive Dysfunction (Mazaux et al, 1997)
- Role of Affective Disorders (Morton and Wehman, 1995)
- Awareness of deficits (Prigitano, 1996)
- Disinhibition Syndromes (Shulman, 1997)
- Increased risk due to TBI as a stressful life event (Frey, 1995)
- Increased risk for individuals with mild TBI associated with psychiatric diagnosis and psychosocial disadvantage (Teasdale and Engberg, 2000)

Research related to TBI and Suicide

- Depression is common following brain injury
- Co-morbid psychiatric diagnosis: pre-existing condition may be exacerbated and underlying, previously undiagnosed problems may surface, elevating risk
- Suicide event may not follow the model of feelings/thoughts, plan and act
- Previous history cannot be discounted
- Individuals with a Neurobehavioral Syndrome and/or a seizure disorder may present an enhanced risk

Emergence of Suicidal Events in Individuals with TBI

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(Mann, The Neurobiology of Suicide and Aggression, 2000)

Aggression

- Trigger/Life Event
- Perception of Attack/Injury/ Threat
- Anger
- Impulsivity
- External Aggressive Act

Suicidal Act

- Trigger/ Depression following TBI
- Perception of Loss, Depression and Suicidal Ideation
- Suicidal Planning
- Impulsivity
- Suicidal Act

Models for Aggressive and Suicidal Behaviors

- Depression
- Bipolar Disease/Manic Depression
- Psychosis/Thinking disorder
- Personality Disorders/Borderline Personality
- Seizure Disorders/Pre and Post-Ictal Changes
- Impulse Control Problems
- Drug/alcohol abuse and addiction
- Anger/Rage problems/ Episodic Explosive Disorder
- Relationship of suicidal act to other aggressive acts

Issues of Diagnosis and Suicide Potential

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- History of prior attempts, pre and post injury
- History of psychiatric illness, pre and post injury
- History of suicide in other family members
- Passive ideation without an active plan
- Role of disinhibition, including medication related problems
- Episodes of Anger/emotional dysregulation

Diagnostic Issues in Individuals with TBI and Suicide Risk

- Thinking problems, executive dysfunction
- Emotional response to injury and disability
- Difficulties with self-regulation and impulse control
- Memory problems
- Compliance with treatment
- Social withdrawal
- Social role changes and isolation

Brain Injury as an Accelerant to Psychiatric Conditions

- Cognitive problems effect problem solving ability
- Psychological issues related to brain injury recovery and adjustment to disability
- Reduced/impaired physical functions effect view of self
- Impulse control problems
- Emergence/expansion of psychiatric issues
- Substance abuse
- Perceived failure

Cognitive, Emotional and Behavioral Issues

- Limited ability to self-manage mood state
- Self-regulation of behavior is impaired
- Problems in selecting behavioral alternatives
- “Stuck” or repetitive quality of behavior
- Difficulty in expressing feeling/mood problems to others
- Anger management
- Family and social role issues
- Seizure related events, possible “kindling”

Impulse Control Issues

- Self worth vs. worthlessness
- Hopelessness/depression/despair
- Anger/Hostility
- Plan
- Method
- Access
- Previous history of suicidal thoughts and attempts
- Capacity to act on plan
- Social withdrawal
- In TBI cases, impulsivity is an important factor

A Model for Understanding Suicide

- Suicide Probability Scale (SPS) John Cull and Wayne Gill, 1988
- SPS uses a four axis system
- Hopelessness
- Suicide Ideation
- Negative self-evaluation
- Hostility

A Four Axis Approach to Evaluating Suicide Risk

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- Loneliness
- Inability to change life
- Problems doing things, initiation
- Not important to others
- Unable to meet expectations
- Few friends
- No future/no improvement
- Perceived disapproval by others
- Feeling tired/listless
- Can’t find happiness

Hopeless Indicators

- Punish others by suicide
- Punish self
- “Better off dead”
- “Less painful to die then living this way”
- Thought of a plan/method
- “Think of suicide”
- “I wish I died in the accident”

Suicidal Ideation Indicators

- Not feeling like a worthwhile person
- Not feeling appreciated by others
- Not missed by others if dead
- Things don’t go well
- Not close to mother
- Not close to father
- Not close to significant other

Negative Self Evaluation Indicators

- Anger/rage control, “gets mad easily”
- Impulsive acts
- Angry feelings towards others
- Feels isolated from others
- Senses anger from others
- Can’t find a job/activity that I like

Hostility Indicators

- Establishes scores in four domains
- Compares score to “average” and standard deviations
- Combines raw score data into a weighted T-score to define “probability”
- Ranks probability risk from mild to severe
- Considers major stressors/upsets over last two years, including past attempts in assessing risk potential

Practical Aspects of the SPS

- Predicts risk potential based on self-report of the individual to questions
- The four axis model provides relationship to dimensions of suicide
- Clinical importance/relevance of questions relates to risk factors
- Limited bias caused by age, gender or ethnicity
- Can be re-administered without practice learning bias
- Current mood state dependent

Suicide Probability Scale (SPS)

- Axial approach provides an opportunity to assess potential for suicidal thinking, planning and acting
- Risk potential is assigned using data from the four domains of the scale
- Test questions relate to current emotional state
- Instrument supports, but does not replace a clinical interview and assessment
- Specific questions/response trigger "risk"

Suicide Probability Scale (SPS)

- Cognitive issues must be considered
- Reading and comprehension support may be required
- The role of denial may effect score and obscure certain risk factors
- Impulsive behaviour(s) will accelerate risk potential
- Planning of suicide, including access and method may be poorly organized, but risk potential may be high
- Passive issues may be significant to risk

Applying the Suicide Probability Scale to TBI

- Clinical assessment based on presentation of suicidal thoughts and plan and the individual's current mental state
- Assessment must include current psychological/psychiatric issues and diseases, past history and psychological stressors
- Use of an assessment instrument will highlight issues, but cannot be used solely without a further assessment
- Current behavioral risk issues must be evaluated
- Prevalence of impulsive behaviors in individuals with TBI will enhance risk potential
- Lack of planning due to cognitive deficits does not exclude the individual from risk assignment
- Mood state issues must be considered

Risk Assessment Process

- Current stressors and/or life changes
- Medication and its effects
- Substance use/abuse
- Specific problem(s) that the individual cannot solve
- Engagement in other self-harmful behavior(s)

Risk Assessment - II

- Is there evidence of suicidal thinking or self-harm?
- Has the person experienced a loss of self-worth related to their disability?
- Is there evidence of depression, including vegetative symptoms?
- Is there a plan and/or method for the act?
- Is there a passive component?
- Is there a past history of suicide attempts?
- Has anger or hostility increased in response to internal or external events?

Risk Identification Leads to Prevention

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- Feeling they would be “better off dead”
- “I wish I died in the accident”
- “I wish God would take me away”
- Feelings of loneliness and isolation
- Need to punish self
- Desire to punish others through suicide
- Exposure to risk or engagement in risky behavior and activities

Passive Suicide

- Setting up event to occur
- Using law enforcement or military action to stage event
- Requires planning and capacity to operate plan
- Individual is resigned to completing the event, no “fail safe” mechanism
- Unlikely to communicate plan to others
- High likelihood of other risk factors being present

“Suicide by Cop”: Passive or Active?

- Engagement in high risk behaviors can be the plan for suicide
- Plan may include motor vehicles, sport activities, fights, drug/alcohol use
- Individual may not see themselves as the “active participant” and may express that these activities provide “relief”
- History may include multiple accidents, overdoses, fights
- Impaired judgment may initiate plan and act
- Stress event may trigger attempt

The Role of High Risk Behaviors in Suicide Ideation and Acts

- Use clinical interview and assessment to determine risk
- Refer to mental health professionals for emergency evaluation and care
- Refer to law enforcement to prevent person from moving forward with plan
- Avoid “contracting for safety” in situations where the person is outside of appropriate and immediate supervision
- Person may express relief or calm when a plan is established
- Maintain awareness of non-verbal behaviors and cues

Prevention and Treatment Issues

- Maintain contact with the person, establish their location
- Keep them engaged/talking
- Enlist help from another person to contact mental health or law enforcement
- Avoid argument or confrontation
- Avoid value judgments

Prevention and Treatment Issues - II

- All mental health, medical and rehabilitation professionals have a duty to protect the individual and others from harm
- Confidentiality and private medical information does not apply in “duty to warn” situations
- Response to protect must be immediate and complete

Duty to Warn and Professional Responsibility

- Suicide risk increases following a brain injury
- Impulsive behavior, cognitive and emotional problems are complicating agents to depression and suicidal thoughts and plans
- Mental health and rehabilitation professionals must manage ongoing risk

Mental Health or Rehabilitation Problem?

- Communication among rehab team members is vital
- Understanding risk factors
- Establishing a safety net, know signs and signals
- Frank discussion with significant other and family of risk potential and signs
- Rapid response to risk upon first identification
- Identifying “triggers” or precursors
- Consider cognitive, behavioral and neurologic issues
- Coordinate psychiatric treatment with counseling and rehabilitation efforts

Adding to Client Safety

- The client
- Their family, friends and others outside of rehab
- Rehabilitation professionals
- Medical and mental health professionals
- Support people in the community
- A plan to respond in an emergency

A Team Approach: Build a Safety Net

- Loss of self-esteem and social role
- Economic problems
- Job Loss
- Relationship problems, loss of friends
- Adjustment to disability
- Social Isolation and withdrawal
- Cognitive, behavioral and executive functioning deficits

The Contributing Factors: The Role of Brain Injury in Suicide

- Recognize mood and feeling state triggers
- Provide definitive, safe behavioral alternatives
- Extend and solidify “safety net” strategies through key people and a safety plan
- Address substance use/abuse issues
- Increase awareness of nonverbal/behavioral cues
- Recognize role of impulsivity in dyscontrol

Psychotherapeutic Strategies

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- Inseparable and intertwined
- Brain injury may accelerate psychiatric disorders
- Neurobehavioral issues may enhance risk
- May occur at any time following injury, not confined to early recovery
- Social role recovery is strongly related to emerging and chronic mental health issues
- Individuals with a brain injury will not “fit” the psychiatric model

Brain Injury and Mental Health Issues in Suicide Attempts

- Understand risk factors
- Respond proactively to first signs
- Use external controls to assure safety
- Involve mental health professionals in treatment and in rehabilitation planning
- Assure continuity between mental health and rehabilitation providers to incorporate brain injury issues in treatment
- Maintain awareness of changes, including those which are subtle

Risk Prevention

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