

OUT OF THE FRYING PAN AND INTO THE FIRE

The Manifestation of Psychiatric
Disturbance After Brain Injury in
Children and Adolescents

JANICE GRAY MA
SARA SOMERS MSW, RSW

Overview

- About Our Program (PABICOP)
- The Adolescent Brain
- Common Psychiatric Issues After ABI
- Risk Factors
- Our Approach
- Case Studies

Paediatric Acquired Brain Injury Community Outreach Program

- Community based outreach program for children and adolescents with ABI
- Five counties in Southwestern Ontario
- Partnership - TVCC and CHWO
- Long term follow-up and support

Team Members

- Developmental Paediatrician
- Nurse Practitioner
- Outreach Coordinator/Social Worker
- School Liaisons (2)
- Psychometrist
- Administrative Assistant

Program Model

- Family centered, multidisciplinary and collaborative
- Clinics in seven communities enables family, school, therapists to attend
- School and community education

Program Model

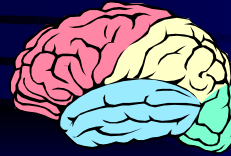
- Home visits
- School visits
- Regular clinic follow-up
- See kids according to their needs
- Holistic approach- issues can be medical, educational or psychosocial

The Adolescent Brain



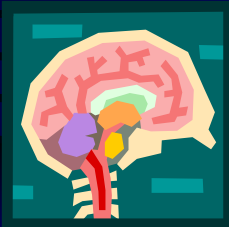
- MRI studies (J. Giedd, NIMH), (E. Sowell, UCLA)
- Structurally different from adult brain
- Frontal lobes, especially prefrontal cortex still developing
- Thickening of white matter, faster connections

Adolescent Brain



- R. Dahl, U. of Pittsburgh; L. Steinberg, Temple U.
- Hormone-brain relationship
- Neurochemical differences (dopamine, serotonin, melatonin)
- May contribute to stimulation seeking behaviour

Adolescent Brain

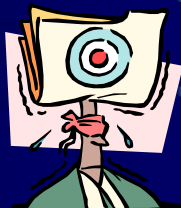


- J. Bjork, NIAAA-fMRI study showed less activity in brain regions directing motivation
- D. Yurgelun-Todd, Harvard - fMRI studies - interpretation of facial expressions

So why does this matter?

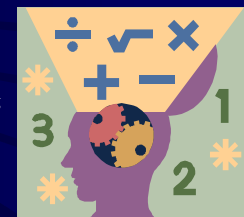
Because ABI generally....

- Affects the frontal lobes
- Results in problems with judgement, impulsivity, motivation, sleep and mood



Frontal Lobe Injury

- Language centre
- Cognitive impairment
- Attention problems
- Emotional lability
- Organization and planning difficulties
- Inappropriate behaviour
- Poor impulse control
- Impaired judgment and decision-making



Emotional Impact of ABI



- Anger
- Frustration
- Low self-esteem
- Mood disorders
- Anxiety
- Depression

Issues for All Adolescents

- Academic Performance
 - present and future course
- Physical Changes
 - confusion and competence
- Psychological
 - who am I?
- Social
 - peers are paramount
- Family Dynamics
 - dependence vs independence

EXTRA Issues for Adolescents with an ABI

- Psychological
 - who am I?
 - personality changes
 - role changes
 - emotional issues-trauma, depression, anger, self-esteem, malingering
 - insight

EXTRA Issues for Adolescents with an ABI

- Social
 - peers are paramount
 - social skills
 - changes in peer group
 - isolation and withdrawal
 - risk-taking behaviour
 - driving

EXTRA Issues for Adolescents with an ABI

- Family Dynamics
 - dependence vs independence
 - emotional issues
 - safety concerns
 - role changes
 - triangulation
 - grief and loss

Observed Psychiatric Issues

- Depression
- Anxiety and panic disorders
- Obsessive compulsive disorder
- PTSD
- Suicidal ideation
- Oppositional defiant disorder
- Conversion disorders
- Behavioural dyscontrol

Impact of ABI

- Grief and loss - perceived and real
- Academic and social status
- Isolation and loneliness
- Loss of skills
- Decrease in ability to cope with demands of school and life in general
- Loss of emerging sense of self

Risk Factors

- Pre-existing psychiatric and/or behaviour problems
- Family history of mental illness
- Developmental issues - risk taking behaviour, substance abuse
- Environmental stressors - lack of supports, family chaos, other crises
- Trauma - PTSD, disfigurement, death

Our Approach

- Continuity of care
- Long term, holistic approach allows for more comprehensive understanding of who the client/family are and what is meaningful to them
- Collaboration and communication +++++
- Available to clients for crisis intervention
- Referrals to psychiatry, trauma program

Our Approach

- Identify grief and loss issues
- Encourage independence and self-control through identification of clients strengths and resources
- Awareness of developmental issues
- Education re normal ABI sequelae
- Validate the experience

CASE STUDIES

Dien - Medical Issues

- Previously healthy 15 yr-old, Vietnamese male
- Staph aureus infection and pneumonia secondary to a stab wound on buttock
- Developed ARDS and septic shock
- Hospitalized 7 weeks
- Multi-system failure
- Right fronto-temporal hematoma requiring right frontal craniotomy

- Extensive debridement of wound requiring skin grafting and colostomy
- Significant left sided hemiplegia
- Required extensive rehab
- Neuropsych assessment
- Discharged home on isolation and bed rest
- High risk of infection
- Primary caretaker 21 year old sister

Dien - Pre-injury

- Immigrant family living in cramped subsidized housing - mom, dad, sister and 2 yr-old nephew at home
- Dad unemployed alcoholic
- Mom working at a Vietnamese restaurant
- Dien never home-running the streets with Vietnamese 'gang'-negative school history
- Alcohol and drug use
- Violence and criminal activity

Dien - Post Injury

- 3 months post discharge -Admitted to hosp feeling suicidal, psychotic episode
- Dx with Major Depressive Episode, PTSD
- Symptoms
 - intermittently isolated himself, sobbing uncontrollably
 - denigrated himself for being weak
 - flashbacks to stabbing
 - major guilt and rumination about circumstances
 - intense feelings of fear

- Reported injecting street drugs to cope
- Psychiatric screening revealed somatic anxiety and depression symptoms and feeling like he had little control over his life
- Inpatient for 2 months
- One month later - presented to emergency with suicidal gestures and thoughts
- Admitted to regional mental health centre for 10 days

- Six month period of little contact
- Attempts at school re-entry unsuccessful
- 6 mths later- presented to emergency (by ambulance) with lacerated wrist
- Anger outburst while drinking - punched window

Interventions

- Medication (Celexa)
- Liaison with in-patient psychiatry
- Counselling and ongoing crisis support
- Recreation therapy
- School liaison advocacy
- Y membership
- Youth en Route program
- Regular clinic follow-up

Dien's Strengths

- Always called when in crisis
- Made himself available for counselling
- Confided in members of our team
- Open to treatment options
- Charming personality, sense of humour
- Able to be introspective
- Good relationship with sister

Alicia - Medical Issues

- 17 yr-old female with previous history of depression
- Unwitnessed fall down flight of stairs onto concrete-LOC unknown
- Initial GCS 13-deteriorated rapidly to 5
- Right hemisphere subarachnoid hemorrhage
- Right frontal and temporal contusions
- Diffuse axonal injury

- Basal skull and facial fractures
- Seizures
- Post traumatic amnesia of 12 days
- Retrograde amnesia-2 months
- Neuropsych screening revealed significant word-finding, attention, memory problems
- Extremely labile mood, ++ anxiety
- Hospitalized 3 weeks - PT, OT, SLP

Alicia - Pre-injury

- Lives in rural setting with parents and two younger siblings
- Mother works at a furniture store
- Father is a long distance truck driver
- Family history of alcohol abuse and depression
- Alcohol used freely in the home
- Generally positive academic history
- Adolescent onset of depression-treated with Paxil

Alicia - Post Injury

- Severe short term memory loss
- Headaches
- Major mood swings
- Anxiety disorder manifested by over attachment to mother
- Panic attacks
- Behavioural disinhibition
- Substance abuse
- Family discord/triangulation

Interventions

- School liaison advocacy
- Medication change to Zoloft
- Weekly counselling with Alicia and her mother-development of behavioural strategies, family issues, encouraging independence (baby steps)
- Referral for neuropsych assessment
- Referral to trauma program
- Regular clinic follow-up

Alicia's Strengths

- Good sense of humour
- Always called when in crisis
- Open and honest in counselling relationship
- Improved relationship with mother
- Motivated to get life back on track
- Largely cognitively intact
- Supportive school/community

Ongoing Issues

- Continue to be at high risk for recurrent or new psychiatric issues
- Life-altering event at a vulnerable age
- Impaired judgement - continue to engage in high-risk activities with potentially more serious consequences
- Will require ongoing support to avoid disaster

Questions?