FRITH GUIDELINES: MEDICATION USE FOR SELF-INJURIOUS BEHAVIOUR

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OUTLINE

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- Definition of Self Injurious Behaviour
- Prevalence of Self Injurious Behaviour
- Clinical Presentation of Self Injurious Behaviour
- Assessment
- Pharmacological Management
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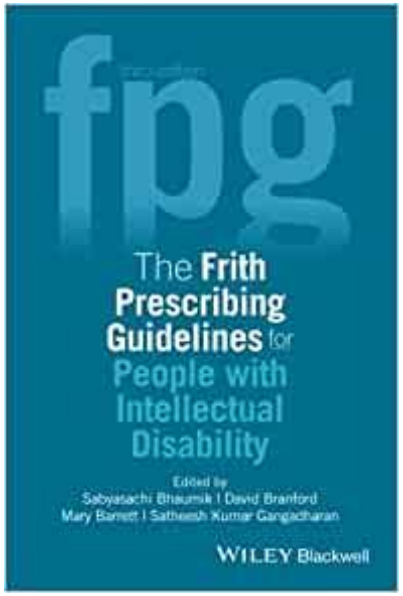
  - Choosing a Medication
- Case Study
- Conclusion

Background



- The only Prescribing Guideline in the UK specifically for People with ID
- Conceived and developed by Clinicians working in ID Services
- Third edition published in 2015

INTELLECTUAL DISABILITY AND SELF-INJURIOUS BEHAVIOUR

- Intellectual disability (ID) is defined as significant impairment of intellectual functioning and adaptive behaviour originating before the age of 18 years (American Association of Intellectual and Developmental Disabilities, 2010).
- Mental disorders are common in people with ID.
- They can experience the full range of mental disorders that occur in the general population some mental disorders that are infrequent in the general population, such as self- injurious behaviour

Definition

- Self-injurious behaviour may be defined as non-accidental self-inflicted acts causing damage to, or destruction of body tissue and carried out without suicidal ideation or intent.
- Self-injurious behaviour (SIB) can be one of the most distressing and difficult behaviours that parents, carers, family members and people themselves may be faced with. (National Autistic Society)

PREVALENCE

- Point prevalence differs between studies
- 1.7 to 41% has been reported in adults with Learning Disability
- 4.2 to 16% in community-based studies
- 5% of adults in large-scale, population-based community surveys
- Curvilinear relationship with age
- No gender difference
- Frequency of SIB increases with severity of ID
- Reported more frequently in those who are blind, or have speech problems or autism

Clinical Presentation

- SIB may be viewed as a symptom of a psychiatric disorder, or in the context of behaviour arising from maladaptive learning or in association with behavioural phenotypes.
- It may present as head banging, head hitting or face slapping, self biting. Skin picking, removing scabs from old wounds, self-pinching or scratching, hair pulling and eye poking.
- It often presents in multiple forms in the same person.

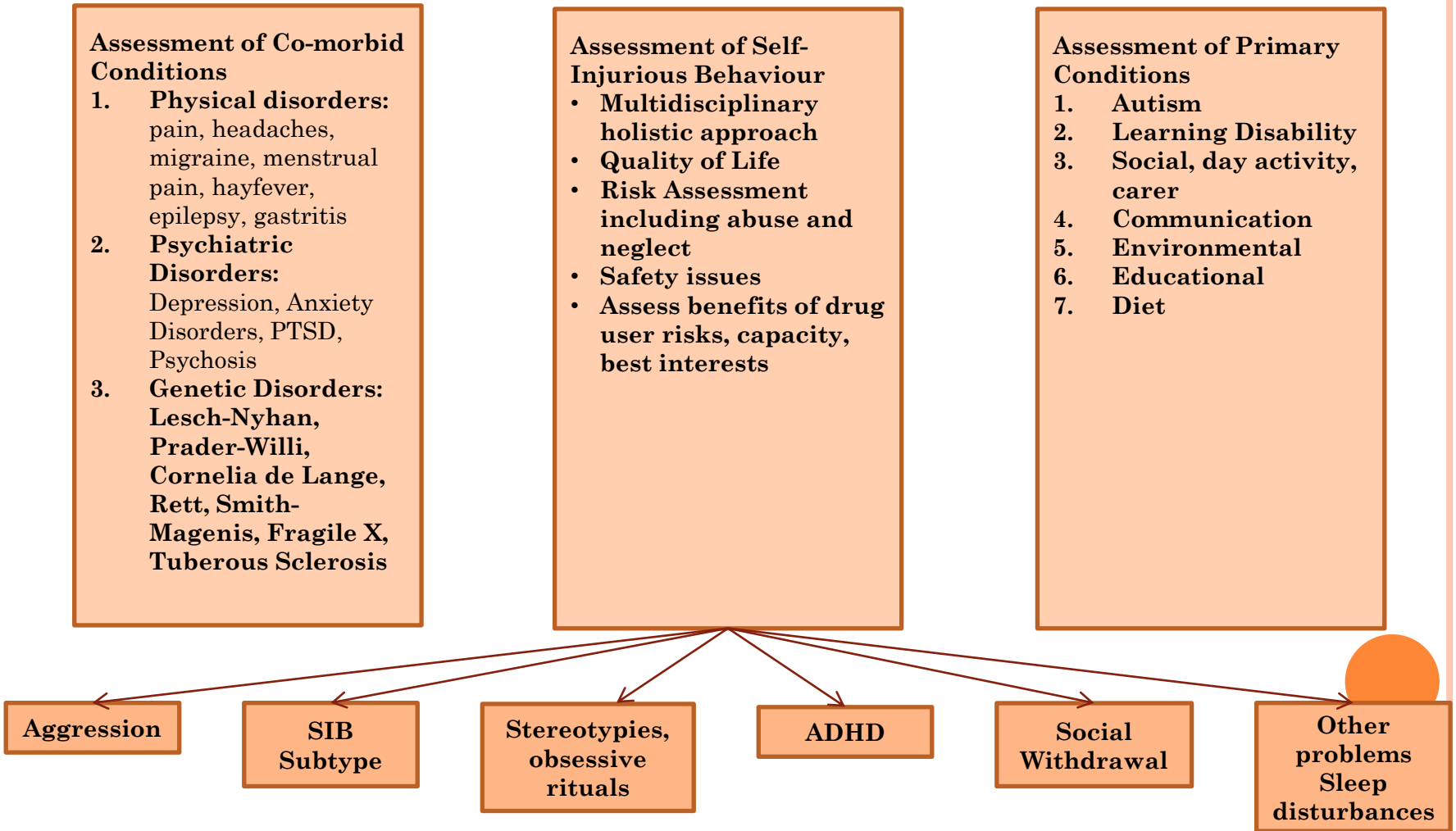
- SIB can be symptomatic of many underlying causes, including communication difficulties, physical health problems and pain.
- A stated earlier, SIB can be a source of severe distress to carers, can pose serious challenge to professionals and may reduce the QOL of the individual

Clinical Subtypes (adapted from Mace and Mauk's model)

Subtype	Central Feature	Neurotransmitter System
Extreme self-inflicted tissue damage	Insensitivity to Pain	Opiate
Repetitive and stereotypic	Features of Autism	Dopamine
Agitation when SIB is interrupted	Obsessive-compulsive behaviour	Serotonin
Heightened Anxiety	High arousal (agitation and SIB co-occur)	Noradrenaline
Mixed	Two or more of above subtype	Multiple

Assessment

- Causation is often multifactorial
- Assessment should be Multidisciplinary



MANAGEMENT

- Behavioural programmes are first line
- They should be continued during treatment with psychotropic medication
- Possibility of serious medication side effect.
- In addition, systematic direct observations and use of rating scales such as ABC or SIT Scale
- Medication should only be used after behavioural methods and other approaches have been tried
- Medication choice is determined by the clinical subtype of SIB

Biological model

- There is evidence from both human and animal research for a role of dysregulation of biological systems in SIB
- Similarly, there is evidence for the efficacy of corresponding pharmacological interventions in some cases.
- The biological model in SIB is based on three types of neurotransmitters- dopamine, opioids and serotonin.

Choosing a medication

- Evidence base for medication use in SIB remains limited.
- There is some data for the use of antipsychotics, antidepressants and Opiate antagonists.
- A Cochrane review (2013) found weak evidence in included trials that any active medication was more effective than placebo for people with ID demonstrating SIB.

- Due to sparse data, an absence of power and statistical significance, and high risk of bias for four of the included trials, no definite conclusions about relative benefits of naltrexone or clomipramine compared to placebo
- In choosing a medication, it is best to use the evidence base and be clear what symptom cluster one is targeting

Rationale of Drug Choice based on Clinical Subtype

Subtype

- Extreme self-inflicted tissue damage

Clinical Features

- History of severe SIB:
  - Fractures
  - extensive scarring
  - lacerations >3x3cm
  - Cauliflower ear
  - auto-amputation
  - loss of consciousness
  - signs of little distress when inflicting self-injury,
  - targeting the head/face/hands/fingers

Psychotropic Medication

- Opiate antagonists: Naltexone

Subtype

- Repetitive and Stereotypic

Clinical Features

- History of Repetitive and Stereotypic SIB
  - Topography of actions are similar, not variable
  - For example hand mouthing, repeated rubbing
  - Short duration between repetitive actions
  - Tissue damage occurs secondary to repetitive injury
  - Other non SIB stereotypic behaviours are also present

Psychotropic Medication

- Atypical antipsychotics:Risperidone, Aripriprazole, Amisulpiride, Quetiapine, Olanzapine
- Typical antipsychotics: haloperidol, levomepromazine, chlorpromazine

Subtype

- Agitation when SIB is interrupted

Clinical Features

- Obsessive-compulsive behaviour
- Agitation or distress when SIB is interrupted
- Mean rate >100 incidents per hour
- SIB stops during another activity but resumes within 30 seconds of its completion

Psychotropic Medication

- SSRIs: Fluoxetine
- TCAs: Clomipramine

Subtype

- Heightened Anxiety

Clinical Features

- High arousal
- SIB rates vary considerably between sessions and settings
- Topographies consist of hitting self, head banging
- Sleep and/or appetite disturbances
- Slowed processing of information
- Anxious affect
- Preoccupied in deep thoughts

Psychotropic Medication

- Anxiolytics: Propanolol, Pregabalin
- TCAs: low dose amitryptyline
- Mood Stabilizers: lithium carbonate, carbamazepine, sodium valproate

Subtype

- Mixed- **most common presentation**

Clinical Features

- A combination of features in two or more of the subtypes described earlier

Psychotropic Medication

- One or more medication classes depending on the predominant subtype

Antipsychotics

- The best available evidence is for **risperidone.**
- It is effective for short-term treatment of aggression, temper outbursts and SIB.
- In children, 0.02 to 0.06mg/kg/day of risperidone was effective and well tolerated for the treatment of severely disruptive behaviours.
- Limited evidence base for olanzapine
- There are no RCTs for aripriprazole, ziprasidone or quietiapine
  - Aripriprazole: two open label studies with small numbers, 92-100% response rate
  - Ziprasidone: two open label studies with small numbers, 50-70% response rate
  - Quetiapine: four open label studies with small numbers, 22-60% response rate

Antidepressants

- Sertraline combined with a behavioural intervention demonstrated a decrease in SIB
- Clomipramine showed clinically significant improvement in the rate and intensity of SIB and stereotypes

OPIATE ANTAGONISTS (NALTREXONE)

- 1st trial: Clinically significant effects (>/=33% reduction) on the daily rates of severe SIB for 3 out of 4 participants and modest to substantial reduction in SIB for all participants. No report on statistical significance
- 2nd trial: Attenuation of SIB in all four participants. Statistically significant decrease in SIB with 25mg and 50mg doses.
- 3rd Trial: different effects depending on the form and location of self injury
- 4th trial: neither single dose (100mg) nor long term (50mg and 150mg) naltrexone treatment had any therapeutic effect on SIB

Case Study

- Sam is a 29 year old male with severe ID, epilepsy and autism. He has long-standing SIB in the form of head-banging, self-biting and scratching. Sam is re-referred urgently to the ID Psychiatrist with “mood swings” and escalating self-biting.
- History taking reveals an alternating pattern of 3days of arousal/insomnia/increased SIB, followed by a week of quietness/social withdrawal/variable appetite. There is no contributory physical or environmental cause.

- The psychiatrist suspects a rapid-cycling mood disorder and prescribes a mood stabilizer with benefit to his mood fluctuations. Review several months later reveals an improvement in self-biting; however, head banging continues to be a concern.
- Observations carried out at the day centre by a member of the ID Nursing Team reveal that Sam's head banging is associated with high physical anxiety levels.

- Behavioural strategies to reduce his anxieties including relaxation and trampolining are tried with limited success; a trial of propanolol is given, with significant improvement, and this allows Sam to successfully engage with the behavioural strategies which further reduces his arousal levels

Conclusion

- The aetiology of SIB is often multifactorial
- Assessment should be multidisciplinary and should take account of all possible aetiological factors
- The evidence base for medication treatment in SIB remains limited
- The potential for medication side effect is significant
- Behavioural approaches are first line and should be continued during treatment with medications
- Identifying the clinical subtype of SIB can help in choosing specific & effective treatments
- When choosing a medication, it is vital to be clear what symptoms one is targeting.

Thank you for listening