Self - Injurious Behaviors:
Assessment and Management

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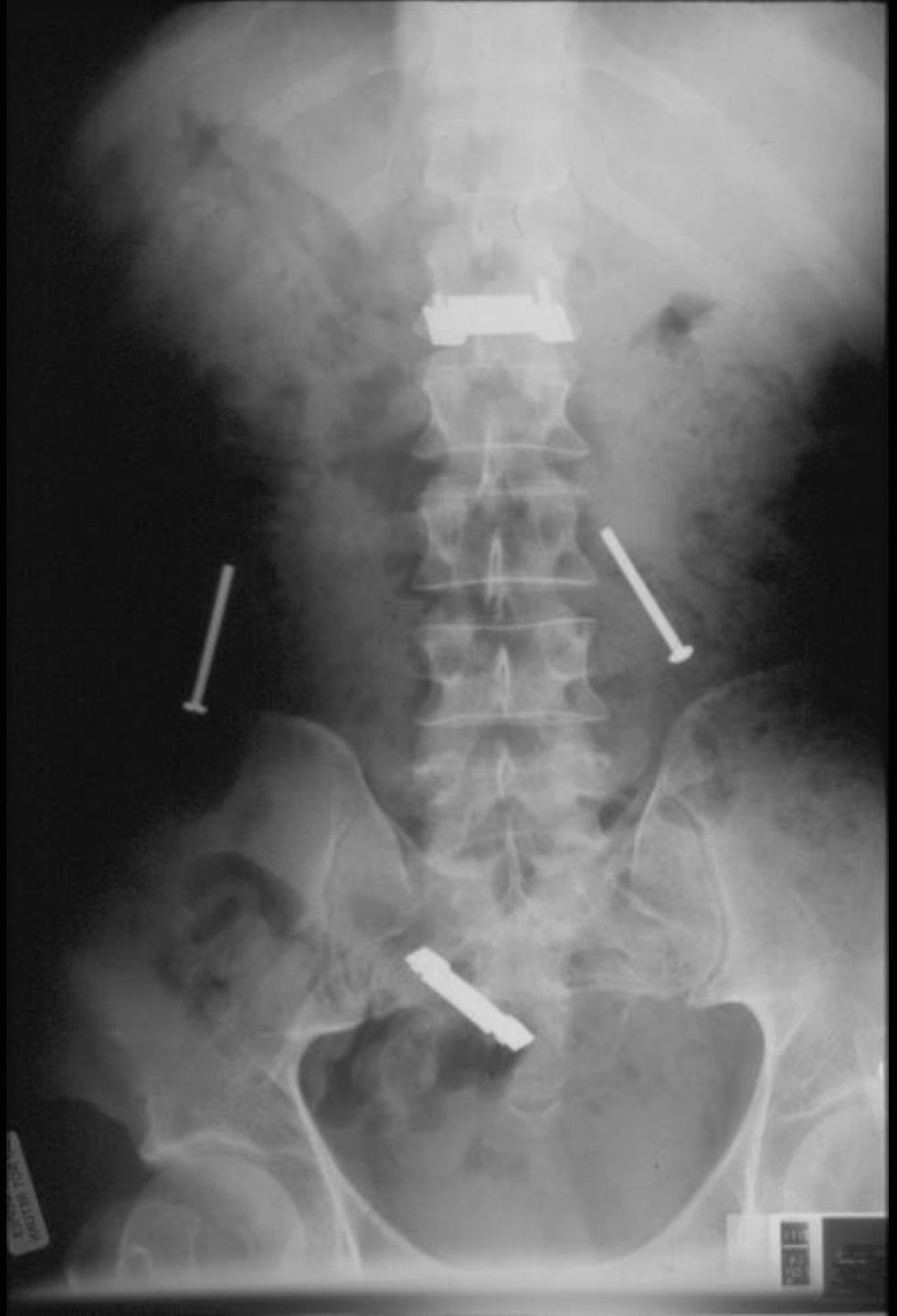
Educational Objectives :

1) Distinguish self-injurious behaviors from suicidal behaviors.

2) Compare and contrast types of self-injurious behaviors and their underlying psychiatric diagnoses.

3) Describe management and treatment of self-injurious behaviors in the correctional setting.



Definitions and Distinctions :

- Self injurious behavior (SIB) – intentional self-directed injury inflicted without conscious intent to kill oneself
- "A basic understanding is that a person who truly attempts suicide seeks to end all feelings whereas a person who self-mutilates seeks to feel better"
- SIB may be a "preferable alternative" to suicide termed the "anti-suicide" model
- Although SIB may not be suicidal in intent, it can rarely lead to "accidental" suicide
- Impulsivity – a dimension of personality defined as the failure to resist an impulse, drive, or temptation that is harmful to oneself or others
- SIB has other names – most current: Nonsuicidal Self-Injury (NSSI)

Simeon D, et al. Self Mutilation in Personality Disorders. Am J Psychiatry 149 (2): 221-226

Nonsuicidal Self Injury (NSSI) in DSM 5: Proposed Criteria under Conditions for Further Study

Intentional self inflicted damage to body w/o suicidal intent for 5 or more days within past year

Person injures self for at least one of these reasons:

- seek relief from negative thoughts/feelings
- resolve interpersonal conflict
- bring about positive feelings

Before the behavior, person experiences one of the following:

- interpersonal difficulty or negative feelings
- preoccupation about self injury which is hard to resist
- frequent urges to self injure

Behavior not accepted by society

Person is significantly distressed by the behavior

Behavior cannot be explained by another mental/medical condition

American Psychiatric Association (2012) Criteria for DSM-5 Non-Suicidal Self Injury Disorder. Washington, DC: APA.

Statistics on SIB/NSSI and Suicidal Behavior

- 4% of adults engage in self injury, much higher in adolescents
- <1% of adults make suicide attempts
- 69$ billion was cost to US for both self harm and suicide in 2015
- Suicide rates have increased 24% between 1999 and 2015 (10.5 to 13.0 suicides per 100,000)
- Suicide is 10th leading cause of death in US

American Foundation for Suicide Prevention. AFSP.org 2015.

SIB vs Suicide Statistics in one prison system:

- 360% increase in self harm incidents while rates of completed suicides remained relatively flat during a 5 year period (2015-2019) in AZ DOC

- 230 self harm incidents as opposed to 12 suicide attempts during the one month (10/2019) in the AZ DOC

Jenkins,J. "A Silent Epidemic: Self Harm Incidents Surging in Arizona Prisons". KJZZ.org June, 2020

Further support for distinct nature of SIB:

Diagnosis (n=548)	SIB	Suicide Attempts
Major Depression	14%	56%
Alcohol abuse	16%	26%
Adjustment disorder	24%	6%
Borderline PDO	9%	9%
Histrionic PDO	22%	4%
Schizoid PDO	2%	9%

Castro F et al. 2002.

Nonfatal Self Harm may portend Suicide

- Long term follow up of 34,219 admissions for self-harm found that 3.5% completed suicide within 9 years
- Another review found a similar 4% risk within 5 years of self-harm
- However, highest risk was most closely associated with diagnosis of severe mental illness (especially bipolar disorder)
- Higher risk of eventual suicide also linked to self-injury method (hanging was most predictive)

Runeson,B et al. Suicide Risk After Nonfatal Self-Harm: A National Cohort Study, 2000-2008. J Clin Psychiatry 2016; 240-246.

Evaluation of Self – Injurious Behaviors :

- Presence of suicidal ideation
- History of prior SIB
- Frequency of SIB
- Medical complications / interventions (lethality)
- Age of onset / longest period free of SIB
- Family history of SIB

Simeon D and Hollander E. Self-Injurious Behaviors : Assessment and Treatment. American Psychiatric Publishing. 2001.

Evaluation of Self – Injurious Behaviors :

- Use of substances prior to or during SIB
- Presence or absence of analgesia
- Identifying underlying psychiatric disorders
- Psychotherapeutic treatment history
- Pharmacologic treatment history

Simeon D and Hollander E. Self-Injurious Behaviors : Assessment and Treatment. American Psychiatric Publishing. 2001.

Evaluation of Self – Injurious Behaviors :

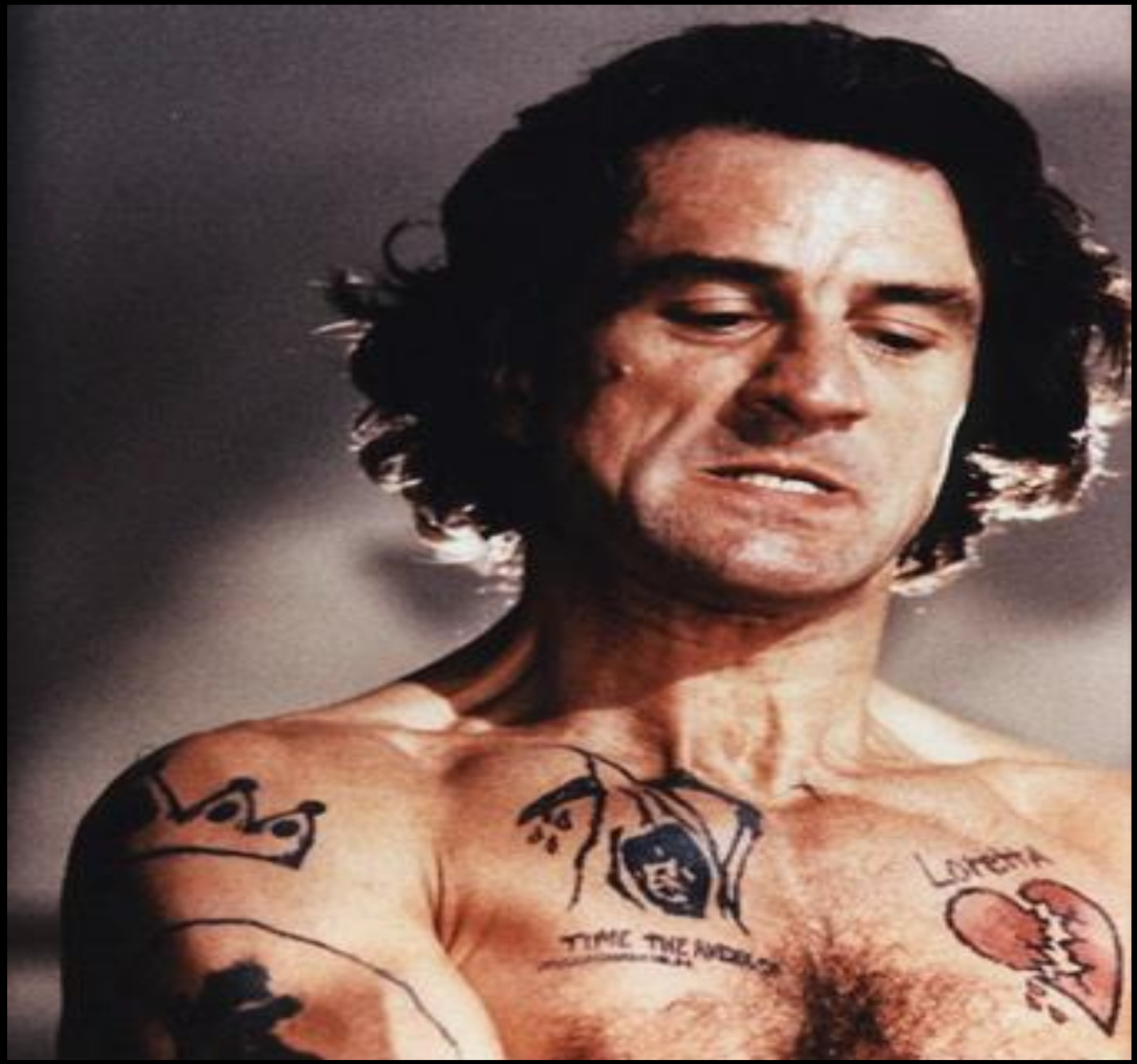
- Motivations / emotions (internal)
- Stressors / triggers in corrections (external)
- Aftermath (affective / interpersonal) of SIB
- Dystonicity / resistance / control
- Preexisting urge / impulsivity
- Classification of SIB

Simeon D and Hollander E. Self-Injurious Behaviors : Assessment and Treatment. American Psychiatric Publishing. 2001.

Classification of SIB

- Stereotyped / automatistic
- Major / psychotic
- Compulsive
- Impulsive
- Other / mixed
- Culturally sanctioned

Simeon D and Hollander E. Self Injurious Behaviors : Assessment and Treatment. American Psychiatric Publishing, Inc. 2001.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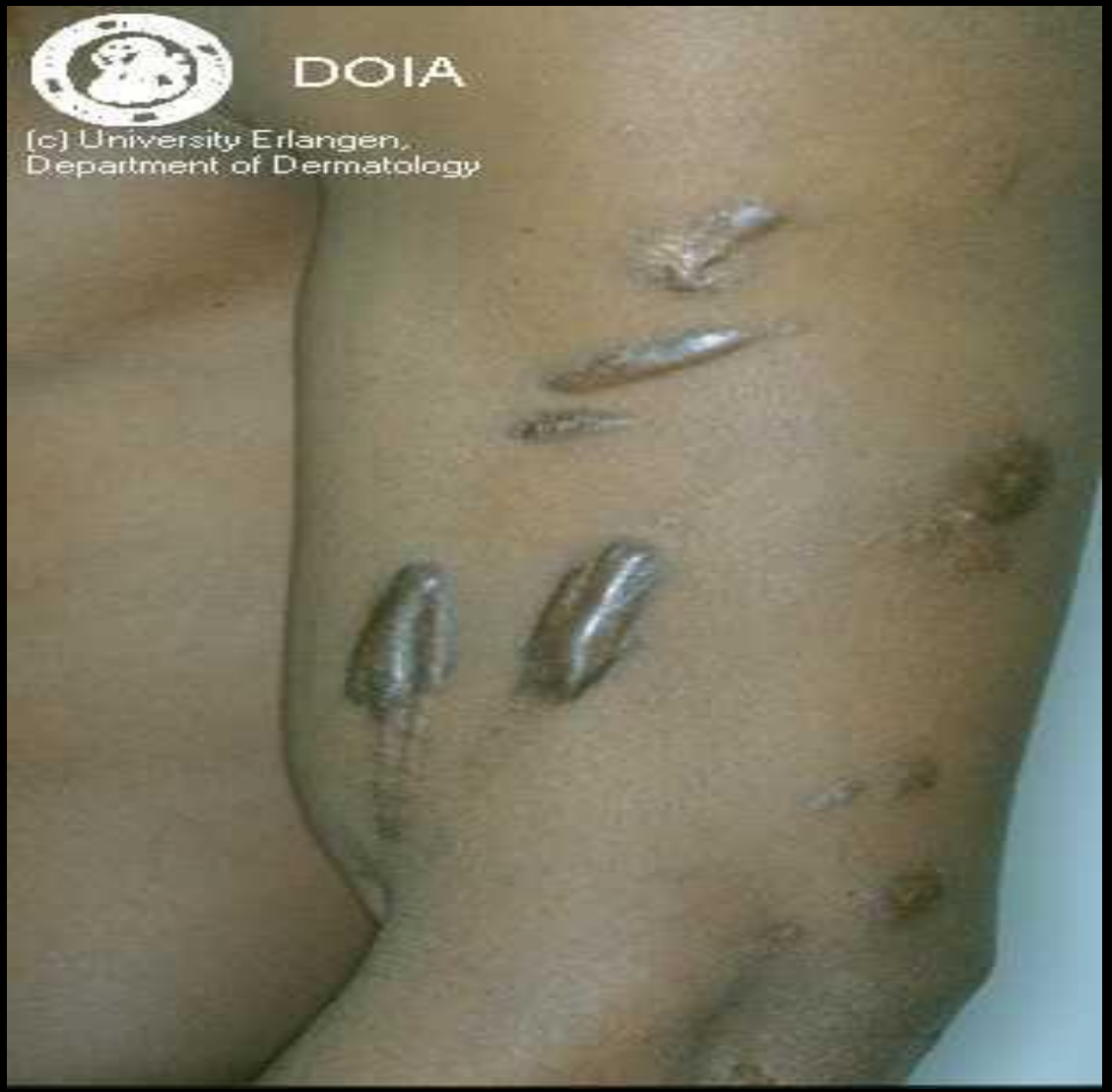
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Department of Dermatology


Piercing Tree

Stereotypic SIB

Behaviors:	head banging, self hitting, self biting, skin picking
Pattern:	highly repetitive, monotonous, fixed, often rhythmic, driven, contentless (devoid of meaning / affect), occur in private more than other SIB's
Damage:	mild to severe (even life threatening)
Disorders:	intellectual disability, autism, congenital syndromes
Prevalence:	3% - 46% in patients with intellectual disability

Simeon D and Hollander E. Self Injurious Behaviors : Assessment and Treatment. American Psychiatric Publishing, Inc. 2001.

Treatment of Stereotypic SIB in Mentally Retarded / Developmental Disorders

- Studies suggest that serotonin and dopamine play roles in mediation of SIB in intellectual disability/autism
- SSRI's , antipsychotics (atypicals), Lithium, Valproic acid, Beta-Blockers, and others have been utilized with mixed results
- 2 DBPC studies with Risperidone in autism with (+) results
- Small studies (+) with Olanzapine and Ziprasidone
- Behavioral interventions and in severe cases restraints may need to be employed

Simeon D and Hollander E. Self-Injurious Behaviors : Assessment and Treatment. American Psychiatric Publishing. 2001.
Janowsky D et al. Olanzapine for Self –Injurious Behaviors in Intellectually Disabled Adults: A Retrospective Trial. J Clin Psych 2003:64

Major SIB

Behaviors:	castration, enucleation, limp amputation
Pattern:	isolated, impulsive or planned, typically involves concrete symbolism
Damage:	severe or life threatening
Disorders:	schizophrenia, psychoses, substance induced, severe personality disorders, transexualism
Prevalence:	rare, majority involve patients with psychosis

Simeon D and Hollander E. Self Injurious Behaviors : Assessment and Treatment. American Psychiatric Publishing, Inc. 2001.

Features of Major SIB :

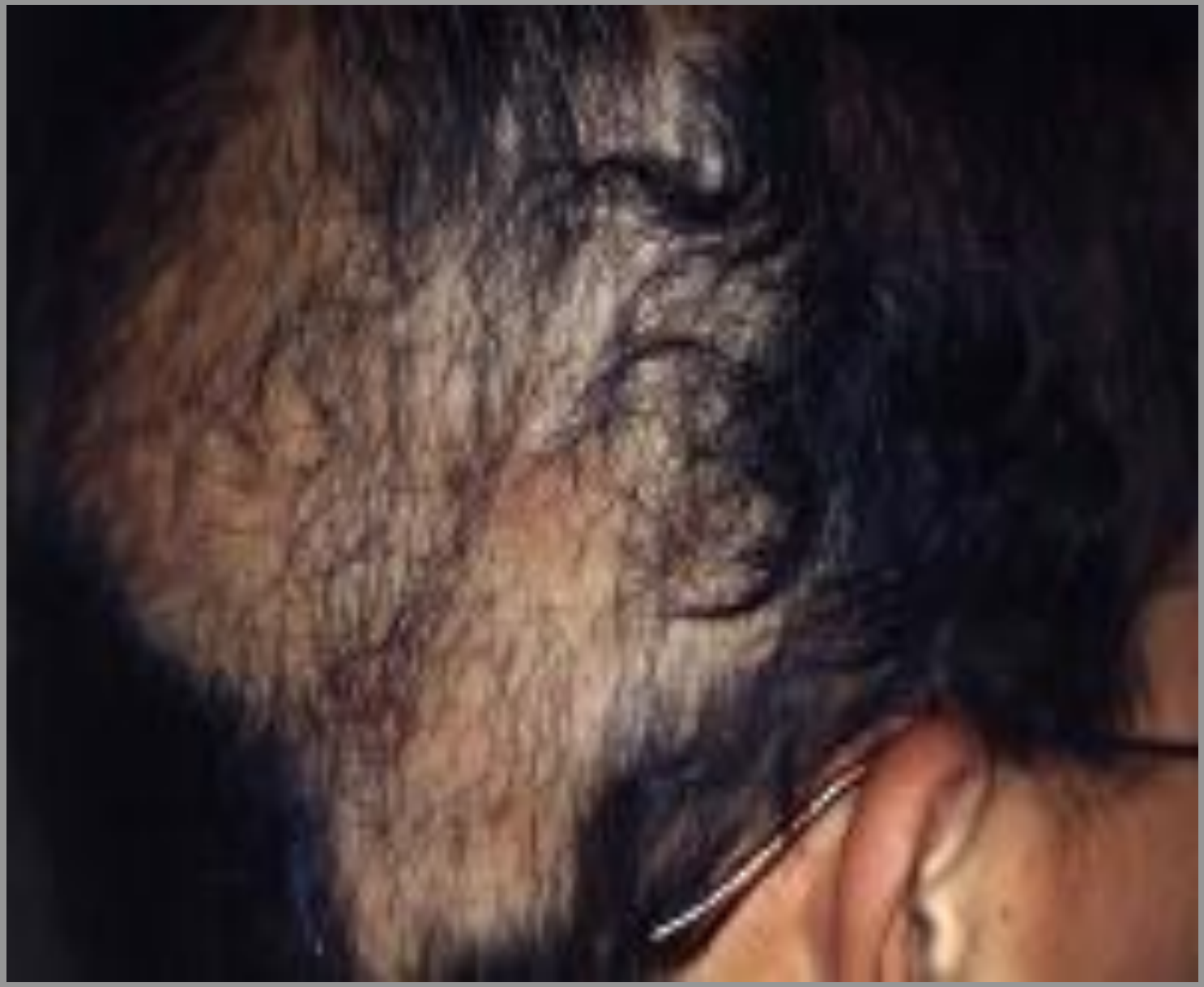
- Several medical studies have found decreased sensitivity to pain in patients with schizophrenia (e.g. 37% vs 95% in appendicitis)
- Many patients report minimal pain associated with act despite severe tissue damage
- Majority of these cases involve males
- Psychosis involved in over 80% of genital mutilations and eye enucleations
  - delusions with themes of sin / guilt / sex / religion
    study found 50% quoted bible (Matthew 5:29) after enucleation
  - command auditory hallucinations
- Treatment : includes medical stabilization and usually antipsychotic agents

Simeon D and Hollander E. Self-Injurious Behaviors : Assessment and Treatment. American Psychiatric Publishing. 2001.

Compulsive SIB

Behaviors:	often represents exaggerated grooming (e.g. hair pulling, skin picking, nail biting) ?? foreign body ingestions / insertions
Pattern:	repetitive, ritualized, symbolic
Damage:	mild to moderate
Disorders:	eating disorders , trichotillomania, body dysmorphic disorder, Tourette's syndrome, Polyembolokoilamania (paraphilia)
Prevalence:	eating disorders are common trichotillomania affects 1-2 % rarely seen in obsessive compulsive disorder, 13% - 53% of patients with Tourette's

Simeon D and Hollander E. Self Injurious Behaviors : Assessment and Treatment. American Psychiatric Publishing, Inc. 2001.



Treatments for Compulsive SIB :

- Atypical antipsychotics and SSRI's for Tourette's
- SSRI's have had questionable efficacy in trichotillomania (40% response in citalopram study)
- Cognitive-Behavioral interventions may be superior to SSRI's (in 2 studies : CBT > SSRI's)
- Better responses with SSRI's in eating disorders and body dysmorphia
- Consider combination approach

Simeon D and Hollander E. Self-Injurious Behaviors : Assessment and Treatment. American Psychiatric Publishing. 2001.

Impulsive SIB

Behaviors:	skin cutting, burning, non-lethal overdoses, self hitting
Pattern:	isolated or habitual, often symbolic, impulsive
Damage:	mild to moderate
Disorders:	borderline (BPD), antisocial (ASPD), post traumatic stress disorder, others
Prevalence:	most common form of all SIB, approximately 75% of patients with BPD

Simeon D and Hollander E. Self Injurious Behaviors : Assessment and Treatment. American Psychiatric Publishing, Inc. 2001.

Multidimensional Causes of Impulsive SIB :

- Biological contributions
  - neurochemical (serotonin, GABA, opioid, dopamine, etc) and structural (amygdala / frontal lobe)
- Psychological contributions
  - "coping mechanism" to avoid suicide
  - serve as self punishment / other dynamic theories
  - regulate negative affects (psychic pain turned outward)
- Social Contributions
  - secondary gains / garners attention and empathy
  - dysfunctional family and support systems
  - poor communication skills

Fong T. Self Mutilation. Current Psychiatry. Vol 2 No 2. February 2003

Role of Serotonin :

- Substantial evidence inversely correlates peripheral and central markers of 5HT function with impulsive, aggressive, and suicidal behaviors
- Diminished 5HT activity (⇩ CSF 5-HIAA) associated with impaired impulse control in variety of conditons (depression, bulimia, cluster B, alcoholism, MR,etc)
- Fenfluramine induced prolactin and cortisol changes blunted in personality disordered patients with SIB
- Neuroimaging studies (PET) have reported decreased 5HT function in areas of prefrontal cortex in impulsive individuals

Villalba R and Harrington C. "Repetitive Self-Injurious Behavior" . Psychiatric Times Vol 20 / Issue 2. Feb 2003.

Role of Endogenous Opioids :

- Conditions in which pain insensitivity accompany SIB include schizophrenia, BPD, and dementia
- Intrinsic pain inhibitory system activated in presence or anticipation of pain – ⇧ beta endorphins
- ⇧ Beta endorphins via "stress induced analgesia" (e.g. wounded soldiers / athletes) may play role
  - psychic numbing
  - escalation of severity (tolerance / addiction)
- Cutaneous SIB resembles acupuncture (?) which may provide potent analgesia via opioid mediation

Villalba R and Harrington C. "Repetitive Self-Injurious Behavior" . Psychiatric Times Vol 20 / Issue 2. Feb 2003.

Psychodynamic Formulations for Impulsive SIB :

- Promote affect regulation
- Reduce anxiety / generate euphoria
- Discharge sexual arousal
- Terminate dissociative experiences
- Serve as self - punishment
- Support dysfunctional relationships
- Serve as nonlethal alternative to suicide

Villalba R and Harrington C. “Repetitive Self-Injurious Behavior” . Psychiatric Times Vol 20 / Issue 2. Feb 2003.

Psychotherapeutic Approaches to Impulsive SIB :

- Psychodynamic psychotherapy
  - most common form of therapy utilized overall
  - attempts to gain insight into causes of behavior
  - teaches healthier ways of coping with negative internal states

- Dialectical behavior therapy
  - most often employed with impulsive SIB in Axis II disorders
  - combines cognitive, behavioral, and supportive interventions
  - in large study, DBT reduced frequency of self-mutilation to 1.5 acts per year compared with 9 acts per year in controls

Linehan MM et al. Cognitive Behavioral Treatment of Chronically Parasuicidal Borderline Patients. Arch Gen Psychiatry. 1993, 50: 157-8.

Medications utilized in treatment of impulsivity and SIB associated with Borderline Personality :

- SSRI's
  - Fluoxetine most studied with 2 DBPC (n=62)
  - others show some benefit in OL/CR
- Antipsychotics – 8 small DBPC with atypicals
- Mood Stabilizers
  - Divalproex with 1 DBPC + study
  - Lithium and Carbamazepine with OL/CR
- Opioid Antagonists / Others
  - Naltrexone has OL/CR with mixed results

DBPC = double blinded / placebo controlled
OL/CR = open label / case reports

Greenberg J and Hollander E. "Brain Function in Impulsive Disorders". Psychiatric Times. March 2003

Self injury in the Inmate Population :

- 5% incidence in early study (Toch, 1985)
- Usually mild to moderate injuries including slashing, head banging, self - hitting, non-lethal overdoses, foreign body insertions, etc.
- In some cases, motives (relief of anxiety/tension) are consistent with impulsive or compulsive SIB
- Most (> 90%) strongly associated with ASPD and other severe PDO's (Virkkunen, 1992)
- Rarely associated with psychosis (10%) (Fulwiler, 1997)

Unique Features of Inmate SIB :

- In 31% conscious manipulation was leading motive (Fulwiler, 1997) – deliberate,calculated acts
- Unusual forms of SIB such as hunger strikes and foreign body ingestions (Stojkovic,2005)
- Low environmental stimulation in prison may precipitate SIB in sensation-seeking antisocial individuals (Virkkunen, 1992)
- Contagion of SIB reported in prisons (Rada,1982)
- ? Terrorism – use or threatened use of force or violence with an intent to coerce societies or governments by inducing fear in their populations (Pastor,2004)

Levels of SIB in Correctional Setting:

I - Superficial / infrequent – adjustment reaction

II - Moderate damage / frequency – personality d/o

III - Severe injuries / relentless - ? DSM 5 diagnosis

Florida DOC – personal experience and communication with MH Director

Management of SIB in the Correctional Setting

- Medical interventions / stabilization
- Determine presence of suicidality not only from subjective statements but from objective data
- Assess lethality / impulsivity / triggers
- Classify type and ascertain underlying diagnoses
- Treatment focused on underlying diagnoses
- Consultation with colleagues / team approach

Florida DOC – personal experience and communication with MH Director

Management of SIB in the Correctional Setting

- Calm / cautious reaction to these dramatic behaviors
- Avoid reinforcement of recurrent SIB with transfers and inpatient admissions
- Behavioral oriented therapies to reduce SIB
- Do not negotiate with “terrorists”
- Less emphasis on psychotropics unless clearly beneficial
- Encourage redirection of energy into more appropriate channels (e.g. requests and grievances)

Florida DOC – personal experience and communication with MH Director

Management of SIB in the Correctional Setting

- Majority of self-injurers will briefly escalate but then cease and desist if behaviors not reinforced
- Minority will persist and require additional services
- Identify 6 month period of less SIB and attempts to recreate environment (housing,visits,activities,therapy,psych meds)
- Utilization of specialized housing units for refractory cases may reduce episodes
- Occupying their time with meetings,groups,and activities may be essential
- High utilizers/"terrorists" may require "drastic" measures

Florida DOC – personal experience and communication with MH Director

Management of Inmates on Hunger Strikes

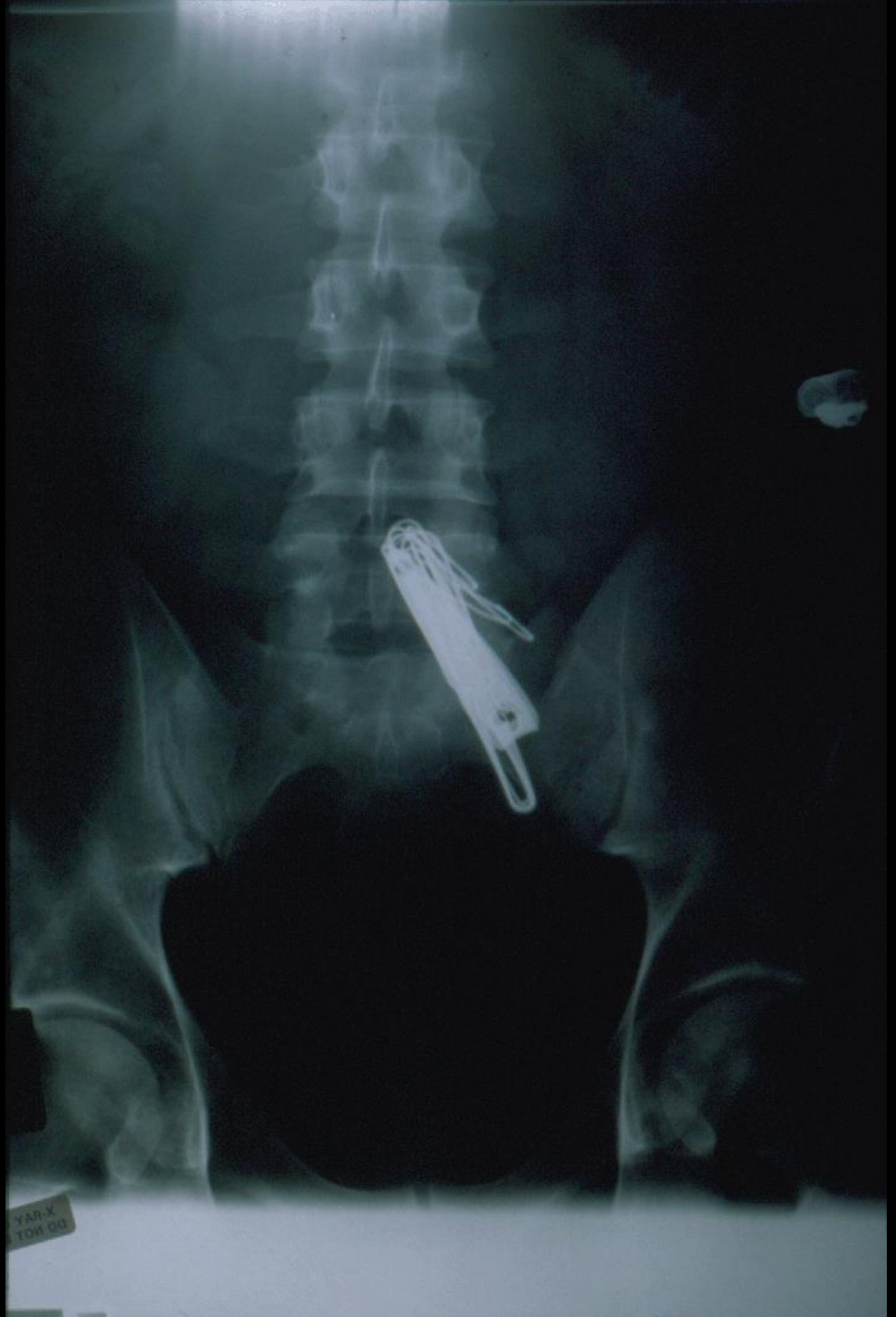
- Response should follow the policies and procedures of the institution / DOC
- Medical assessment to obtain baseline weight, vital signs, labs, and complicating illnesses
- Mental health assessment for presence of delusions, suicidality, and mental status changes
- Typically housed in isolation setting to closely monitor food / fluid intake, weight, signs of dehydration and malnourishment

Stojkovic,S. Nelson,MB. *Managing Special Populations in Jails and Prisons.* 191-199. CRI, NJ 2005

Management of Inmates on Hunger Strikes

- Majority of cases are voluntary / volitional for system manipulation with specific grievance or agenda. May rarely see contagion or “mass” strike.
- Rarely driven by serious mental illness but often find presence of character/personality pathology
- Effective management requires team effort by security, medical, mental health, and even legal
- Encourage inmate to eat by offering meals regularly and possibly oral nutritional supplements
- May require involuntary feedings (IV fluids / NG tubes)

Stojkovic,S. Nelson,MB. *Managing Special Populations in Jails and Prisons.* 191-199. CRI, NJ 2005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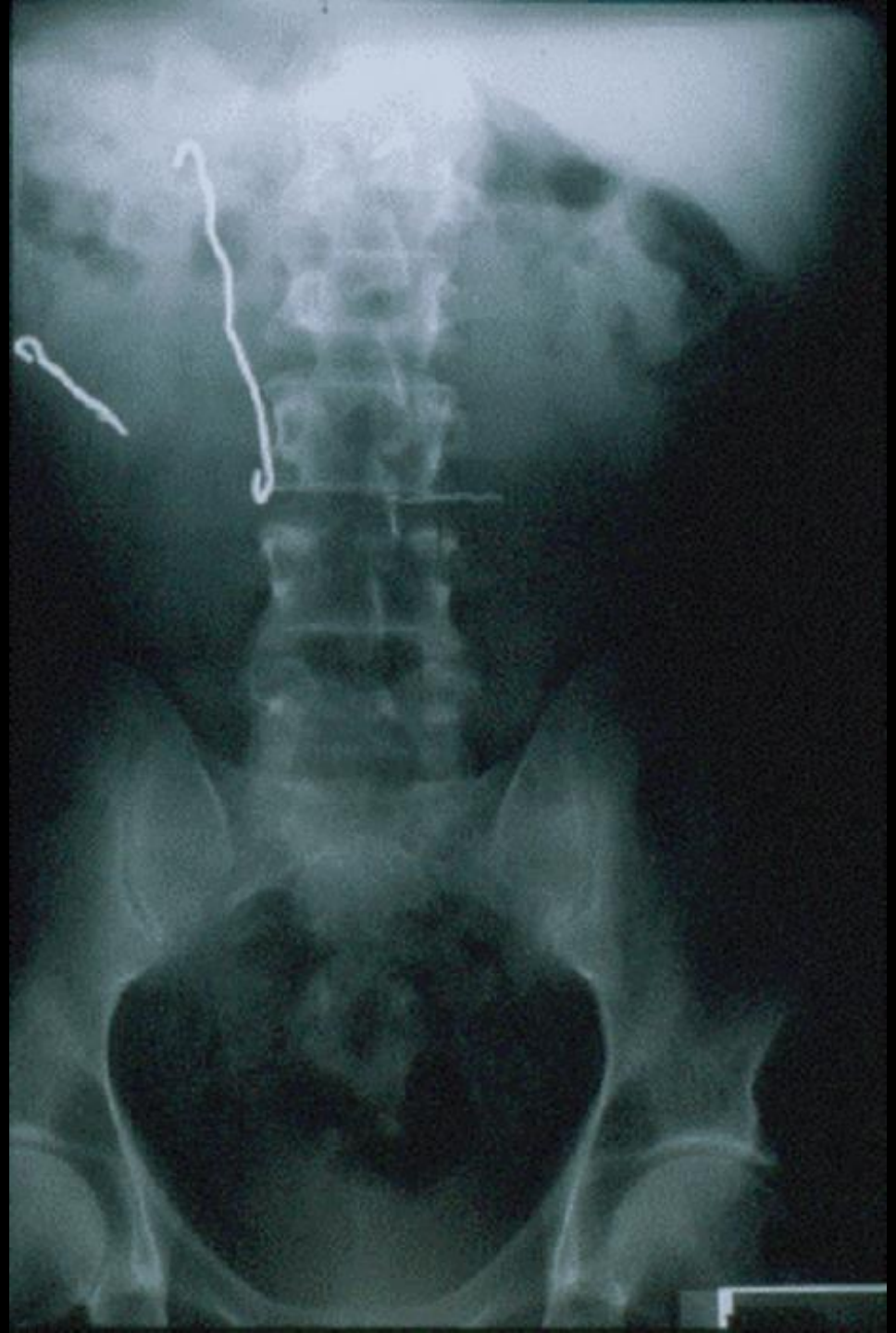
Foreign Body Ingestions / Insertions :

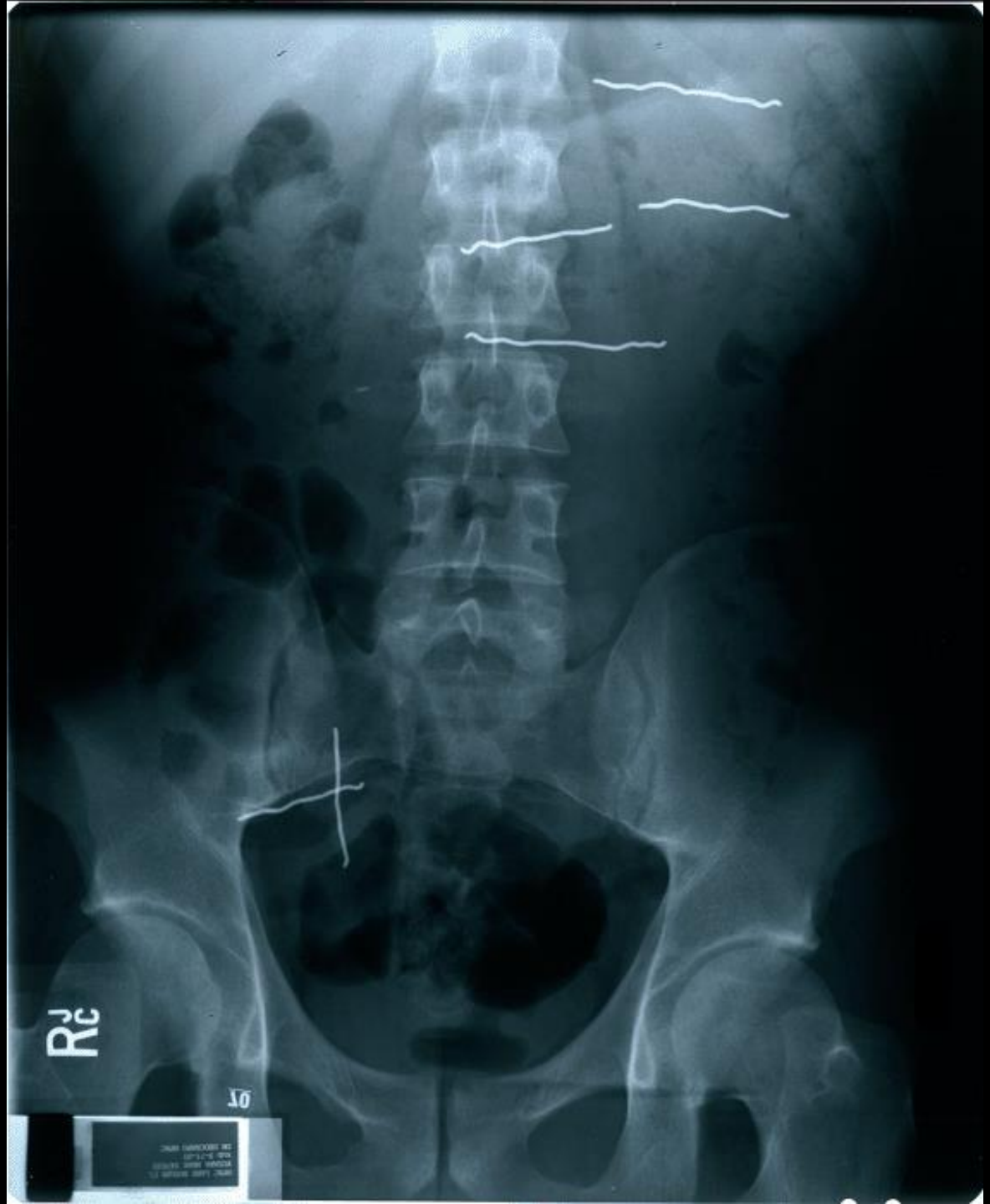
- Relatively unique to the inmate population
- Manipulation predominant factor in these acts
  - rarely compulsive, impulsive, sexual, or even factitious components
- Mental health intervention
  - individual assessment and diagnosis
  - often very limited impact with treatment
  - obtain second opinion from colleague
  - avoid reinforcing these behaviors
- Medical intervention
  - usually requires only monitoring of passage (radiographic studies)
  - may need endoscopic retrieval or surgery (sometimes multiple)
- Team approach (mental health, medical, security)

Fulwiler C et al. Self-mutilation and suicide attempt: distinguishing features in prisoners. J Am Acad Psych Law 25:69-77, 1997

Practical Interventions by Security Staff for Foreign Body Insertions/Ingestions:

- Physical barrier over pie-flap with restrictions highlighted
- 2 person verification system regarding restrictions
- Daily (at least) cell checks by security
- Random / Frequent mattress swap outs
- Reduce or eliminate use of inmate workers
- Officers assigned to MH watch switched out every 2-4 hrs
- Security enforcing DOC policy (windows uncovered, etc.)
- Physical barrier to prevent passage of items between cells
- Body scanner implementation if possible

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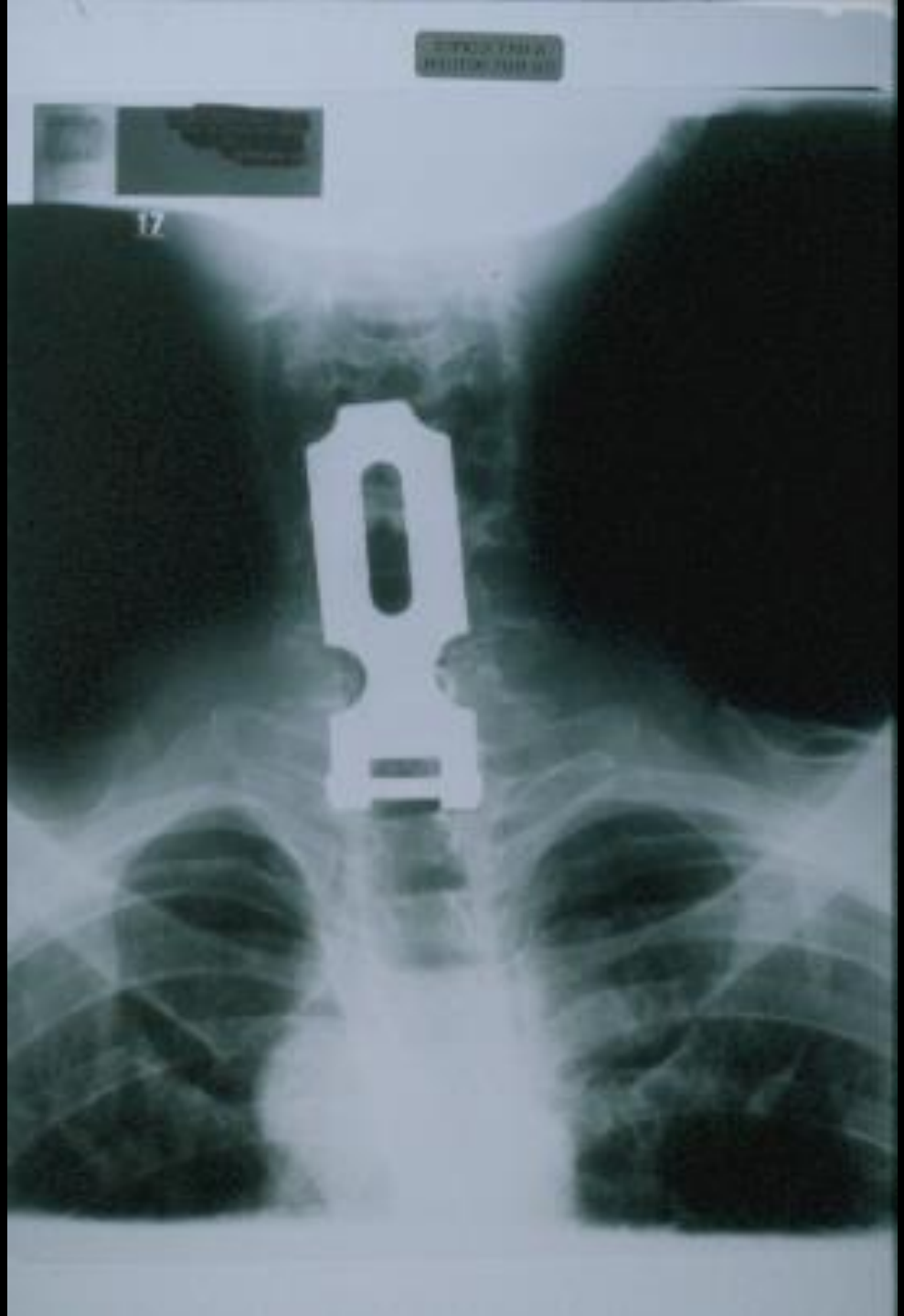
Summary and Concluding Remarks

- Etiology of SIB is multifaceted
- SIB that is distinct from suicidality is exhibited by various individuals
- Classification of SIB may assist in identification of any underlying psychiatric disorder
- Treatment interventions should be multidisciplinary and most effective if aimed at the underlying diagnosis



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Questions and Discussion