Making Sense of Autistic Spectrum Disorders, and Mental Health Issues in ASD

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Outline

Clinical Features and Natural History of ASD [8:30 -10:00 a.m.]
• Leo Kanner’s lasting contributions
• Behavior Management
• Psychopharmacology for non-medical professionals
• Behaviorism and its Limitations

Break [10:00 – 10:15]

Mental Illness in ASD: The Elephant in the Room [10:15 – 11:30]
• Neuropsychiatric Co-Morbidity
• Family function / dysfunction
• Does ASD predispose to violent crime?
• Proposed care model

Atypical features improve over time...

...But society is raising the bar.

Transition to Middle School

“Friendship is getting more complex and he is falling further behind his peers... We think he may be lonely.”

Parent of a 10 y.o. boy with ASD and normal IQ

www.drcoplan.com

MRN 06-0361

Transition to Middle School

Now that he’s 10, he’s less cute. It was cute when he was 5; not when he’s 10.
Transition to Adulthood

Our son turned 13 last year. We are noticing that...the world interacts very differently to an autistic child vs. an autistic man.

“Losing the diagnosis”

• Just because someone outgrows childhood criteria for ASD does not mean that they are cured

“Losing the Diagnosis” does not equal “Cured”

• Broad Autism Phenotype
  - Social Impairment
  - Communication Impairment
  - Restricted, repetitive behaviors & interests
  - Anxiety Disorders / OCD
  - Depression
  - Bipolar Disorder
  - Alcoholism
  - Schizophrenia

Non-ASD Psych D/O

Psych D/O

NLD, SPLD

ASD (Autism, PDD-NOS, AS)

Adult outcomes for children who “lose the diagnosis”
(Coplan, J. Making Sense of Autistic Spectrum Disorders, fig 5.8)

“Losing the Diagnosis” does not equal “Cured”

• Atypicality
  - Social:
    - Theory of Mind
  - Language:
    - Pragmatics
    - Prosody
  - Cognitive
    - Central Coherence
  - Sensory/Motor:
    - Aversions / Attractions
    - Clumsiness

• Cognitive Rigidly
  - Difficulty changing mental sets
  - Repetitive behaviors

• Anxiety
  - Generalized Anx. D/O

• Depression
  - Bipolar D/O

DD Model

Mental Health Model

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Mental Health in ASD…..

the elephant in the room

ASD and Mental Illness: The Myth

ASD

Mental Illness

ASD and Mental Illness: Reality

ASD

Mental Illness

Piet Mondrian (1872-1944) – Line over Form

Claude Monet (1840-1926) – Water Lilies
Children with ASDs, age 10+: Neuropsychiatric co-morbidity

IAN Research Report #1 - May 2007
http://www.iancommunity.org/cs/ian_research_reports

Adults with ASD – Online Survey
http://www.iancommunity.org/cs/ian_research_reports/adults_on_the_autism_spectrum_september_2009

It’s a family affair…

TS, Anxiety, ASD

Anxiety, OCD, ASD

DB, MRN: 08-0543

SK, MRN 12-0824
Anxiety, Depression, ASD, Agitation

- Anxiety / Agoraphobia
- Depression
- Suicidal Mentation
- ASD Anxiety
- Agitated behavior (55 mo)
- ASD Anxiety
- Agitated behavior (27 mo)

BPD, OCD, Anxiety, AS

- Bipolar Disorder
- OCD
- Anxiety
- Asperger Syndrome
- Anxiety
- Speech Delay
- "Processing Disorder"

TS, Anxiety, Depression, Bipolar D/O, ASD, ADHD

- Depression
- Bipolar D/O
- Generalized Anxiety D/O w. Panic Attacks
- ASD
- TS
- AD/HD

Parents & Siblings of Children with ASDs: Issues of Attention and Mood (self-report survey)

- ADD/ADHD
- Anxiety
- Depression
- Bipolar D/O

Parents of Children with ASDs: Depression or Bipolar D/O

- Depression
- Bipolar
- Neither

Epidemiologic Evidence

- ADHD
- Anxiety
- ASD
- Bipolar D/O
- Schizophrenia

IAN Research Report #7 - October 2008: Parental Depression History
http://www.iancommunity.org/cs/ian_research_reports/ian_research_report_oct_2008
Examining the comorbidity of bipolar disorder and autism spectrum disorders: a large controlled analysis of phenotypic and familial correlates in a referred population of youth with bipolar I disorder with and without autism spectrum disorders.

Subjects & Methods:
- Secondary analysis of data from a family study of youth with Bipolar I D/O (probands = 157, relatives = 487)

Results
- 30% (47/155) of Bipolar I probands met criteria for ASD
- Onset of Bipolar I occurred earlier in the presence of ASD (4.7±2.9 y vs 6.3±3.7 y; p=.01)

“Is Schizophrenia on the Autism Spectrum?”
King & Lord, 2011

- “Schizotypal Personality” is distinguished by “unusual preoccupations, unusual perceptual experiences, odd thinking and speech (e.g., overelaborate, or stereotyped), inappropriate or constricted affect, behavior or appearance that is odd, eccentric, or peculiar; lack of close friends or confidants other than first-degree relatives, and social anxiety…”

“Is Schizophrenia on the Autism Spectrum?”
King & Lord, 2011

- “What arguably distinguishes schizophrenia spectrum from autism spectrum in two individuals who otherwise share all of these symptoms is the presence of paranoid ideation…”

- “Given the degree of overlap, one might reasonably ask if paranoid thinking could be a logical downstream consequence of a common underlying difficulty in the perception of social communication”

What’s happening in this picture?
“Two strangers got into the house and are handing out newspapers.”

Laboratory Evidence
- ADHD
- Anxiety
- ASD
- Bipolar D/O
- Schizophrenia
Genetic relationship between five psychiatric disorders estimated from genome-wide SNPs
Cross-Disorder Group of the Psychiatric Genomics Consortium

Pleiotropy: One gene affects multiple phenotypic traits

Developmental brain dysfunction: revival and expansion of old concepts based on new genetic evidence
Andreia Morena De Luca*, Luiz de Almeida, Thomas D. Robinson, Andreia Morena De Luca, David H. Evans, David M. Laveder
Lancet Neurology 2013: 12: 406-414

Network Topologies and Convergent Aetiologies Arising from Deletions and Duplications Observed in Individuals with Autism
PLOS Genetics, June 6 2013
http://www.plosgenetics.org/article/info%3Adoi%2F10.1371%2Fjournal.pgen.1003523

• 192 genes form an interconnected cluster
• Patients with copy number variations within this cluster possess on average, 3 CNV’s
• Many of these genes are implicated in psychiatric disorders in humans (anxiety, e.g.), and/or behavioral abnormalities in animal models (abnormal nurturing behavior, e.g.)

Table 1: Variable expressivity in selected microdeletion syndromes

<table>
<thead>
<tr>
<th>Gene</th>
<th>Frequency in clinical cohort*</th>
<th>Intellectual disability or developmental delay</th>
<th>Autism spectrum disorder</th>
<th>Schizophrenia</th>
<th>Epilepsy</th>
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<td>✓</td>
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<tr>
<td>1q21</td>
<td>1 in 369</td>
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<td>✓</td>
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<tr>
<td>1q21.13-q21.3</td>
<td>1 in 369</td>
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<td>✓</td>
<td>✓</td>
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<td>-</td>
<td>-</td>
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<td>5q35</td>
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<td>✓</td>
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<tr>
<td>19p13</td>
<td>1 in 2201</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>-</td>
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</tbody>
</table>

*Frequency in individuals referred for chromosomal microarray testing. Common indications for testing include neurodevelopmental disorders and multiple congenital anomalies.
The Real Elephant in the Room

Child w. ASD + Parent with MH D/O = DANGER!

Family Mental Health

(“We give our children roots and wings” — Hodding Carter)

Family Mental Health is a key ingredient in outcome for all children, but especially for the child with developmental disability, who is less able to work around obstacles arising from family dysfunction than a child with normal development.

Signs of Family Mental Health

• Cognitive, Emotional, and Tactical Flexibility
  – Shifting alliances (adults vs. kids, “boys vs. girls,” etc.)
  – Shifting roles (role of “hero” or “in the doghouse”)
  – Shifting solutions (one size does not fit all; “equitable” vs. “equal”)
  – Shifting combinations for activities. All legitimate combinations should come up once in a while.

• Sense of humor / playfulness / resilience

Individual Mental Health as a contributor to family mental health

• Parents of children with ASD:
  – High frequency of neuropsychiatric disorders (esp. anxiety, depression)
  – Decreased Theory of Mind skills
  – Limits adult’s ability to respond in a flexible manner to the extraordinary demands from child w. ASD

Danger Signs

• Inflexibility
  – Fixed roles
  – Fixed solutions

• Hypervigilance
  – Lack of trust in care providers

• Social Isolation
  – “Circle the wagons” mentality
  – “Nobody helps us!”

Vignette #1

• “Obedience is very important to me.”
  – Father of 10 y.o. boy with ASD
    • Father has untreated anxiety d/o
    • Works in law enforcement
    • Keeps unsecured firearms in the home
    • Perceives his son with ASD as “a predator,” because “everything is all about him”
Anxiety, OCD, ASD

Vignette #2

• “Nobody helps us.”
  – Mother of 14 y.o. boy with ASD
    • Family has no social supports
    • Child is on homebound instruction
    • Spends hours / day watching violent video games
    • Threatens to “kill” the examiner during home visit
  – Mother has untreated Anxiety D/O

Does ASD predispose to violent crime?

FOR EVERY COMPLEX PROBLEM THERE IS A SIMPLE SOLUTION... AND IT IS WRONG

H. L. Mencken

http://www.examiner.com/article/ryan-lanza-reveals-brother-adam-lanza-was-autistic-had-personality-disorder
http://www.theatlanticwire.com/national/2012/12/adam-lanza-bio/60018/

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People want immediate or simple answers when an unimaginable tragedy like this occurs. Autism did not cause this horror...


Autism Canada's Statement On The Sandy Hook Elementary School Tragedy 12/17/2012

- It has been reported that the shooter at Sandy Hook Elementary School had autism. In the weeks and months to come there will be much more information about his condition, but today it has never been more important to understand that autism / Asperger's is not a mental health condition. Autism is a neurological condition.....

ARI Statement on the Newtown, CT Tragedy

The staff at the Autism Research Institute is deeply saddened by yesterday's tragic events at Sandy Hook Elementary School in Newtown, Connecticut...
Some public comments have drawn potentially inaccurate and stigmatizing conclusions about a link between the diagnosis [of autism] and a propensity for violence and lack of empathy...
Autism is not a mental health disorder - it is a neurodevelopmental disorder...

Autism Society of America Statement 12/17/2012

- No evidence exists to link autism and premeditated violence...
- Individuals with autism who act aggressively typically do so because they are reacting to a situation...
- Many of the individuals with Asperger's syndrome who have committed crimes had co-existing psychiatric disorders...

We have a problem here...

- ASD and MH are not mutually exclusive, separable entities
- Shifting responsibility onto “Mental Health Disorders”:
  1. Stigmatizes the MH population, and
  2. Ignores the MH needs of the ASD population
Case Series of adult males referred for forensic evaluation

Charges:
- Arson (1)
- Sexual assault (4)
- Attempted murder (1)

Asperger's syndrome in forensic settings
Murrie DC, Warren JI, and Kristiansson M
Int J Forensic Ment Health 1:59–70, 2002

Case History
AB: 31 y.o. male, arrested for arson
Referred for forensic psychiatric evaluation after 11 episodes
No prior criminal history or clinical diagnosis

His parents described a developmental history in which he was generally shy and quiet and considered “peculiar” by teachers. In school, he had some concentration difficulties due to being extremely careful about details. His parents described a series of special interests, to which AB devoted extensive research time….His parents also described a strict adherence to routines. For example, they described meals as “ceremonies” in which every part was to be performed in a certain order. When his parents tried to make changes in his routines, AB became very irritated.

Often, he left jobs after conflicts with supervisors or other staff. His boss described AB as so wedded to routines that he was unable to be flexible or cope with unanticipated changes.

Socially, he had some friendships, but these occurred one at a time. He was reportedly bullied, or at least showed an over-sensitivity to behaviors by peers. For example, years later, he reported being unable to forget incidents such as being shot at with a water gun.

AB lived with his parents and had no sexual or romantic relationships. But, he explained that if he could just afford a large apartment, he would immediately be married.

According to his parents, about one year before the crimes AB became increasingly irritable and verbally aggressive. During this time, he tended to isolate himself more often, to purchase numerous pornographic magazines, and to ruminate about episodes during his childhood in which he believed schoolmates mistreated him.

During evaluation, AB described the year prior to his offense as a period in which he became increasingly preoccupied with those who had wronged him and increasingly convinced that he needed to avenge himself. He reportedly considered burglary for revenge, but later began to fantasize about firesetting. When AB saw an arson report on the news, he decided that firesetting was the best way to solve his problems.

CD, a 27 year-old male, was referred for evaluation after a sexual offense involving a teenage male. At the time of the evaluation CD carried an Asperger’s diagnosis based on adult functioning and early history. In kindergarten, for example, he was described as “oblivious to everyone around him.” Mental health records from his adulthood also noted his marked social impairments and deficits in nonverbal communication. CD graduated high school with a mediocre academic record, and worked for several years as a fast-food worker with limited customer contact.

Although he was intensely preoccupied with having intercourse, his efforts to find partners tended to be rather passive and naive. CD summarized his courtship strategy as “hanging around” a woman “until sex happened.”
Asperger's syndrome in forensic settings  
Murrie DC, Warren JI, and Kristiansson M  
Int J Forensic Ment Health 1:59–70, 2002

Unfortunately, his attempts at sexual contact—both those that resulted in intercourse and those that did not—tended to result in CD being used or exploited by others. For example, he repeatedly took women from his housing project shopping for lingerie, thinking that doing so could be a prelude to sexual contact, but the women would leave after he made the purchase...He also related stories of attempts to make sexual contact that resulted in women stealing possessions or money from him, and in one instance, beating him severely.

His first contact with the legal system and our subsequent evaluation occurred after CD had repeated sexual contact with a 15-year-old male over a period of several days. CD met the young man, who reportedly had no place to stay at the time, in their apartment complex laundromat and the two subsequently went to CD’s home. Over the ensuing days, CD bought the young man a variety of presents, gave him money, and had an active sexual relationship with him.

The contact ended when CD was no longer willing to give the youth money. The youth left CD’s home, taking his stereo. When CD went to the police station to report this theft, he was subsequently arrested for sexual assault against a minor.

Common Themes  
Deficient Empathy: Each of the four men charged with a sex offense, as well as the man who attempted murder, seemed genuinely unaware of the harm they caused their victims. Likewise, the arsonist appeared untroubled that he destroyed property belonging to strangers, rather than to those against whom he sought revenge.

Interpersonal Naiveté: A naïve and often impoverished understanding of human relationships...not only leaves Asperger’s syndrome patients vulnerable to mistreatment by others, but also may lead them to seek interpersonal contact in misguided ways...CD maintained a sexual relationship with a teenage male and demonstrated his ignorance of the inappropriateness of this relationship by going to the police to complain that the youth took his stereo when the relationship ended.

Immediate Confession: At least four of the six men were quick to confess to the police. This could reflect a variety of traits ranging from deficient shame, poor judgment, lack of experience, or an impaired appreciation of the social and legal consequences of a confession, to simple forthrightness, rule-abiding behavior or honesty. This warrants additional research, as it would be of considerable significance if such confessions were not fully competent or voluntary.

Asperger's syndrome in forensic settings  
Murrie DC, Warren JI, and Kristiansson M  
Int J Forensic Ment Health 1:59–70, 2002

Sexual Frustration: At least five of the six men had sexual problems, and four were quite harmful to others when acting upon their sexual drive, highlighting the quandary faced by men who are interpersonally less equipped to initiate or sustain the types of intimate relationships commonly associated with consensual sexual contact...Clinicians working with Asperger’s syndrome patients should recognize that social impairments combined with a desire for attachment or sexual experience could lead to illegal behavior...The use of pornography was one socially tolerated ways by which several of the men in our sample pursued an impersonal sexual outlet....
Autistic symptoms in childhood arrestees: longitudinal association with delinquent behavior

• Research Objectives:
  – To compare childhood arrestees with matched comparison groups on levels of autistic symptoms
  – To assess the predictive value of autistic symptoms for future delinquent behavior
  • Children’s Social Behavior Questionnaire (CSBQ)
  • Observed Antisocial Behavior Questionnaire
  • Diagnostic Interview Schedule for Children (DISC)

• Community Sample: 422 children detained or arrested for the first time <12
• Refusals 117
  • Participants N = 308
    • Males: 87%
    • Mean IQ: 88
  • Controls: Normal children, Children with ASD
  • 24 m F/U N = 235

Autistic symptoms in childhood arrestees: longitudinal association with delinquent behavior

• Results:
  – Indicators of atypicality:
    • ASD > Arrestees > Normals, p < 0.01
  – For Arrestees:
    • CBSQ score predicted future delinquent behavior (p < 0.001, even after adjusting for externalizing behavior)

• Conclusions:
  • Childhood arrestees...have more autistic symptoms than children from the general population, and less than autistic individuals
  • Among the arrestees, autistic symptoms were uniquely positively associated with future delinquent behavior
  • Although mediated by co-occurring externalizing disorders, autistic symptoms predicted delinquent behavior over and above externalizing disorders

Bottom line…
• This topic deserves research
• Most studies are small scale (“underpowered”) and suffer from ascertainment bias, lack of controls, poor outcome measures, etc.
What you can do

House Rule #1
• Get both parents to come in for the interview & informing session
  – Have a sofa if possible, and watch the body language
  – “What do you think about what your spouse just said?”

House Rule #2
• No medication unless parents agree to behavioral and MH evaluation for their child and/or themselves, if you deem it necessary

Probe Questions
(In ascending order of intimacy)
• Do you and your partner ever go out as a couple? When was the last time?
• Who else do you have as supports?
• What have you told your other children / parents?
• Tell me a little bit about yourself / how you were raised / your own mental health?

Neurodevelopmental Pediatrics of the Main Line, PC

Psychoactive Medication – Informed Consent Form

Medication cannot cure developmental or behavior problems. However, medication can sometimes alleviate biologically-based symptoms, such as inattention, impulsivity, anxiety, depression, cognitive rigidity, agitation, disruptive, or self-injurious behavior. Medication alone is frequently less effective than medication plus behavioral or mental health services.

Therefore, in addition to administering psychoactive medication to your child, Dr. Coplan may recommend behavioral and/or mental health services as part of your child's treatment plan as follows: …..
House Rule #3
• The family is a system ➔ The unit of treatment is the family
• Assess mental health of all players
• Assess relationships among the players
• Fostering the family’s ability to move forward is my #1 goal. The child’s parents & siblings will be involved with my patient long after I have left the stage.

NASP: School-based Mental Health Services
• “Mental health is directly related to children’s learning and development. It encompasses or intersects with interpersonal relationships, social-emotional skills, behavior, learning, academic motivation, certain disabilities, mental illness (e.g., depression or bipolar disorder), crisis prevention and response, school safety and substance abuse. Each of these issues affects not only the success and well-being of the individual student but also the school climate and outcomes for all students
• “School-Based Health Clinics” where students and their families can come to the school for all medical, social-emotional, and/or behavioral health services
http://www.nasponline.org/advocacy/overview_sbmh.pdf

The Student is your charge, but often the unit of treatment is the family
• Assess mental health of all players
• Assess relationships between / among the players (“family systems approach”)
• The child’s parents & siblings will be involved with this child long after you have left the stage.

Summary
• ASD has a natural history for improvement over time, insofar as visibly atypical features are concerned
• Cognitive & behavioral patterns persist
• Mental Illness is not “a separate problem.” Rather, impaired MH is another expression of shared neurobiology
• Over time, mental health issues present a progressively greater challenge, that may supersede the ASD

Summary
• ASD in a child is a red flag for developmental and/or mental health disorders in parents / siblings
• Optimal outcome for the child with a disability depends upon addressing the parents’ mental health issues, as well as the child’s developmental and mental health needs
Summary

• To be successful, intervention needs to be multimodal and family-centered
  – Mental health intervention
    • Child: Self-awareness, self-esteem, self-regulation
    • Parents: Address their own MH issues
    • Family: Take a family-system approach
      – Flexibility / Resilience within the family structure
      – Siblings are at high risk for genetically based morbidity, and/or collateral damage because of family system dysfunction
  • Educational / Vocational services
  • Psychotropic Medication - often

Summary

• Need for Adult Services
  – Clinics for “Long-Term Survivors of Childhood ASD” patterned after Long-Term Survivors of Childhood Cancer
    • Mental Health
    • Job coaching
    • Social contact
    • Family / Caregiver support (parents, partners)
    • Developmental screening of offspring

Need for Adolescent and Adult Services

• Social Skills Groups
  • Social Stories
  • DTT
  • VB
  • OT
  • NET, PRT, DIR
  • SLP
  • TEACCH

Vocational Support
Educational Support
Community Living Skills
Mental Health Services
Caregiver Support

Resources

• Married with Special Needs Children; A couples’ guide to keeping connected. Marshak LE and Prezant, FP. Woodbine, 2007
• Voices from the spectrum. Parents, grandparents, siblings, people with autism, and professionals share their wisdom. Ariel, CN and Naseef, R (eds). Jessica Kingsley, 2006
• The American Association of Marriage and Family Therapy http://www.aamft.org/MIS15/AAMFT/
• The Bowen Center: http://www.thebowencenter.org/

Thank you