AUTISM SPECTRUM DISORDER: IDENTIFICATION, EVALUATION, AND MANAGEMENT

BRIAN SMITH, MD
MSU PSYCHIATRY

- Identification
  - Signs/symptoms
  - Screening
- Comprehensive evaluation
- Management
  - Applied Behavioral Analysis
  - Pharmacotherapy

NEURODEVELOPMENTAL DISORDER:

*SOCIAL** COMMUNICATION AND INTERACTION DEFICITS

*RESTRICTED AND REPETITIVE BEHAVIORS, INTERESTS, AND ACTIVITIES

DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS 5 (DSM-5): AUTISM SPECTRUM DISORDER

- **Social Deficits**
  - Social-emotional reciprocity
    - Failure to initiate or respond to social interactions
    - Limited back-and-forth conversations
    - Reduced sharing of interests, emotions, or affect
  - Nonverbal communication
    - Abnormal eye contact
    - Limited use or understanding of body gestures
    - Limited facial expressions
  - Relationships
    - Difficulties making friends/absence of interest in peers
    - Difficulties sharing imaginative play

DSM-5: AUTISM SPECTRUM DISORDER

- **Behaviors/Interests/Activities**
  - Stereotyped or repetitive
    - Simple motor stereotypies
    - Lining things up
    - Echolalia
  - Routines/Sameness
    - Difficulties with change/transitions
  - Fixated interests
    - Abnormal intensity or focus
  - Sensory
    - Adverse response to texture/sound
    - Indifference to pain/temperature
- DSM-IV: Pervasive Developmental Disorder, Asperger's, and Autistic Disorder

- Based on social communication impairments and restricted and repetitive patterns of behaviors. interests, and activities
- Separate levels for each of these domains (not added together)
- Level 1 (“High-functioning”)
  - Requiring support, but may live independently with minimal
- Level 2
  - Requiring *substantial* support
- Level 3 (“Severe”)
  - Requiring *very substantial* support

EARLY CHILDHOOD (*LACK OF…*)

- Eye contact
- Social smile
- Shared enjoyment with caregiver
- Response to name
- Pointing
- Pretend play
- Speech/language delays (or echoing)
- Within first 2 years, there may be some regression/loss or plateau of social behaviors and/or language

- Lack of interest in socializing
- Limited facial expression/gestures
- Monotone speech
- Difficulty having back-and-forth conversation
- Takes things literally
- Disruptive behaviors

SCREENING

- Pediatrician at 18 and 24 months well-child exams
  - Modified Checklist for Autism in Toddlers (M-CHAT)
    - Score that remains 2 or higher
- Age 4 or above
  - Social Communication Questionnaire (SCQ)
    - Score > 15
- Refer for comprehensive evaluation, if screens positive

- Differential
  - Developmental delays/Intellectual disability
  - Speech and language disorders including Social (Pragmatic) Communication Disorder
  - Hearing/vision impairments
  - Trauma/attachment disorders
  - Social anxiety/selective mutism
  - Tics/Tourette's
    - Versus stereotypies
  - Sensory Integration Disorder
  - Nonverbal learning disorder
  - Medical conditions: tuberous sclerosis, Fragile X, Landau-Kleffner, etc.
  - Often "undiagnosed" ASD by my clinic in past!

- Need multiple informants/observers
  - Parents may have different perspectives about same child
    - Example of divorced couple
  - Parents may not initially recognize in their first born
- Important to know family history
  - Strong genetic heritability (90%)

- Autism Diagnostic Interview (ADI)
- Autism Diagnostic Observation Scale (ADOS)
  - ADI and ADOS typically completed by a psychologist
  - Sensitivity and specificity of 80/72 and 91/76% respectively
  - Chance of false positives with lower specificity
- Psychiatric clinical interview
  - Explore differential diagnosis
  - Childhood Autism Rating Scale (CARS2)
    - 28 or above
  - Autism Mental Status Exam
    - 5 or above

MICHIGAN MEDICAID: ESSENTIAL COMPONENTS ASD EVALUATION

- Caregiver interview
  - ADI
- Record review/collateral input
  - Medical and other treatment providers
  - School/teachers
- Developmental/Cognitive and Adaptive Behavior Assessment
  - Developmental disabilities—Children's Global Assessment Scale (CGAS)
  - Cognitive measure appropriate to age/developmental level
  - Vineland Adaptive Behavior Scales
- Observational Assessment
  - ADOS
- Integration Information/Caregiver Feedback/Report

DIAGNOSTIC EVALUATION: OTHER CONSIDERATIONS

- Refer to Geneticist
  - Chromosomal microarray and Fragile X DNA analysis
- Lead screening
- Audiology
- EEG
- Psychoeducational testing
  - IQ and achievement
  - Adaptive skills

WHY ARE EARLY IDENTIFICATION, EVALUATION, AND MANAGEMENT IMPORTANT?

- Better outcomes
  - Intervening as early as 18 months gains in language, social communication, and daily living skills/adaptive behaviors
  - Some children after interventions make so much progress that no longer on the spectrum when older
- In addition to earlier diagnosis and treatment, higher IQ and better language skills also tied to better prognosis

- Over a 10-year period, increased prevalence from approximately 1 in 100 to 1 in 40 children (more than 2% population)
- Why?
  - Increased awareness and more/better screening/testing
  - Better detection/More high functioning, lower severity diagnoses
  - No change in rates of diagnosis from DSM-IV to DSM-5
  - Not vaccines!

- Early Intervention
  - <36 months old
  - Early Start Denver Model (ESDM)
    - Behavior therapy
- School services
  - ≥ 36 months old
  - Individual Education Plan (IEP)—ASD designation

- Applied Behavioral Analysis (ABA)
  - Set of principles that focus on how behaviors change, or are affected by the environment, as well as how learning takes place
  - Decrease problem behaviors and improve communication and social skills
  - Expensive– $5-20K/month without insurance
- Occupational Therapy (OT)
  - Sensory sensitivities
- Social Skills Training
- Speech/Language
  - Pragmatics

Medical/Behavioral/Speech Language all represented

The MSU Team (East Lansing):

Pediatrics

Child Psychiatry

Child Psychology

Speech Language Therapist (*required)

- Targets symptoms of common comorbid problems—doesn’t change core condition
- Medication trials are very “hit and miss” and sometimes paradoxical responses/increased sensitivity to side effects

- Aggression/Self-injury/Irritability
  - Risperidone
  - Aripiprazole
  - Other antipsychotics and mood stabilizers
- Anxiety
  - SSRIs
  - Buspirone
  - Clomipramine
  - Benzodiazepines such as lorazepam
    - Alternative: hydroxyzine

- Hyperactivity/Impulsivity
  - Stimulants
    - Can now be diagnosed with both ADHD and ASD
    - Lower response than ADHD without ASD
  - Alpha-2-agonists
    - Clonidine and guanfacine
  - Atomoxetine
- Sleep disturbance
  - Melatonin

- Autism Alliance of Michigan (AAoM)
- Autism support through Community Mental Health
- Adaptive Social Program Providing Instruction, Recreation, and Enrichment (ASPPIRE)
- Michigan Rehabilitation Services (MRS)—job search and support
- Building Opportunities for Networking and Discovery (BOND at MSU) and other college programs

- At its core, ASD is a neurodevelopmental disorder that involves social deficits not better explained by other conditions
- Early identification, evaluation, and management are important
  - Etiology is often multifactorial involving both genetic and/or environmental factors
  - A comprehensive evaluation may be most accurate and lead to appropriate interventions
  - ABA is the gold-standard but not necessary or appropriate for all children with ASD
  - Medications may target related symptoms but do not address the core condition

THANK YOU!

Brian Smith MD

517-353-3070

smithbmd@msu.edu