Medical Issues for Children with Autism

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Disclaimer

- The purpose of this lecture is to provide current medical information on evaluating, diagnosing, and treating a child with autism.
- General questions regarding information presented in this lecture will be answered. However, questions of a *personal nature* regarding the diagnosis and treatment of autism in relatives of members of the audience will not be entertained.
What Is Autism?

- Autism is a neurodevelopmental disorder characterized by marked impairment in social interaction and communication and a restricted repertoire of activity and interests.
Etiology of Autism

- Prevalence of autism 1 in 88
- No clear cause for autism
- Possible genetic and environmental interaction
- A small number of cases may be due to an underlying metabolic, infectious, or genetic disorder (untreated PKU, congenital CMV, fragile X syndrome)
Diagnostic Criteria for Autistic Disorder

Diagnostic and Statistical Manual of Mental Disorders Fourth Edition Text Revision (DSM-IV-TR) definition:

(1) Qualitative impairment in social interaction, as manifested by at least 2 of the following:
   (a) Marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression
   (b) Failure to develop peer relationships appropriate to developmental level
Diagnostic Criteria for Autistic Disorder

(c) A lack of spontaneous seeking to share enjoyment, interests, or achievements with other people

(d) Lack of social or emotional reciprocity
Diagnostic Criteria for Autistic Disorder

(2) Qualitative impairments in communication as manifested by at least one of the following:

(a) Delay in, or total lack of, the development of spoken language

(b) In individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others
Diagnostic Criteria for Autistic Disorder

(c) Stereotyped and repetitive use of language or idiosyncratic language

(d) Lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level
Diagnostic Criteria for Autistic Disorder

(3) Restricted repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following:

(a) Encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus
Diagnostic Criteria for Autistic Disorder

(b) Apparently inflexible adherence to specific, nonfunctional routines or rituals

(c) Stereotyped and repetitive motor mannerisms

(d) Persistent preoccupation with parts of objects
Diagnostic Criteria for Autistic Disorder

B. Delays or abnormal functioning in at least one of the following areas, with onset prior to age 3 years:
   - social interaction
   - language as used in social communication
   - symbolic or imaginative play

C. The disturbance is not better accounted for by Rett’s Disorder or Childhood Disintegrative Disorder
Diagnosing Autism

- Complete history and physical examination (search for etiology—tuberous sclerosis, fragile X, Angelman syndrome)
- Audiologic Evaluation
- Comprehensive speech and language evaluation
- DNA for routine chromosomes, DNA for fragile X testing
- ?? Lead level, EEG, MRI, plasma amino acid assays
Diagnosing Autism

- Use DSM-IV-TR criteria and standardized assessment tools to gather information from parents/teachers regarding their observations of the child.
  - Childhood Autism Rating Scales (CARS)
  - Autism Behavior Checklist (ABC)
  - Gilliam Autism Rating Scale (GARS)
  - Autism Diagnostic Interview-Revised (ADI-R)
  - Autism Diagnostic Observation Schedule (ADOS)
Differential Diagnosis of Autism

- Global developmental delay/mental retardation
- Developmental language disorder
- Hearing impairment
- Landau-Kleffner syndrome (acquired aphasia in association with an abnormal EEG)
Differential Diagnosis of Autism

- Rett’s syndrome (mutation in MeCP2 gene)
- Childhood disintegrative disorder
- Severe early deprivation/reactive attachment disorder
- Anxiety disorders/obsessive compulsive disorder
Medical Conditions Associated with Autism

- Epilepsy—prevalence 11%-39%
- GI problems—constipation/diarrhea
- Insomnia—associated with daytime behavioral difficulties
Medical Conditions Associated with Autism

- Intellectual Disability—prevalence 41%
- Motor impairments—hypotonia, apraxia, clumsiness, toe walking, gross motor delay
- Sensory processing disorder
Psychiatric Conditions Associated with Autism

- Anxiety
- Mood disorders
- Obsessive-compulsive-like behaviors
- Aggressive behavior
- ADHD
- Self-injurious behaviors
Conventional Medicine Treatments for Autism

- Autism is a chronic neurodevelopmental disorder
- No cure presently
- Current treatment includes:
  - Behavioral management
  - Parent training
  - Habilitative therapies (speech, OT, and PT)
  - Medication (AEDs to treat seizures, psychototropic meds for psychiatric disorders)
Behavior Management in the Treatment of Autism

- Applied Behavioral Analysis (ABA)—structured, repetitive, intensive
- Floor time model—focuses more on engaging young children in social interactions, speech and language therapy, and occupational therapy
Parent Training

- Parents require support from child’s primary care physician
- Community support through local regional center
- Support through national organizations (Autism Society of America, The National Autism Association, Unlocking Autism, etc.)
medications used in the treatment of autism

- Currently, no medication has been shown to directly treat the core symptoms of autism

- October 6, 2006 – FDA approved the use of, RISPERDAL® (antipsychotic medication) for the treatment of irritability associated with autistic disorder, including symptoms of aggression towards others, deliberate self-injuriousness, temper tantrums, and quickly changing moods, in children and adolescents ages 5 to 16 years.
Medications Used in the Treatment of Autism

- Medications used to treat various symptoms found in autism:
  - Inattention/hyperactivity (stimulants, Atomoxetine)
  - Aggression and disruptive behavior (atypical antipsychotics, alpha-adrenergics, antiepileptics)
  - Symptoms of anxiety/OCD (SSRI’s)
Complementary and Alternative Medicine

Definition: A group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine.
Complementary and Alternative Medicine

- Complementary Medicine:
  - Used with conventional medicine
  - Example: Use Aromatherapy to lessen a patient’s discomfort after surgery

- Alternative Medicine:
  - Used in place of conventional medicine
  - Example: Use a special diet to treat cancer instead of surgery or radiation
Complementary and Alternative Medicine Therapies

- Alternative Medical Systems
  - homeopathic medicine
  - naturopathic medicine
  - traditional Chinese Medicine

- Mind-Body Interventions
  - meditation
  - prayer
Complementary and Alternative Medicine Therapies for Autism

- Supplementation with high-dose vitamins and minerals (Vit C, Vit B6, Vit B-12, Mg)
- Nutritional supplements (DMG)
- Elimination Diets (gluten-free, casein-free diets)
- Polyunsaturated Fatty Acid (PUFA)
- Immune globulin therapy (IVIG)
- Antibiotic or Antifungal therapy
Complementary and Alternative Medicine Therapies for Autism

- Secretin therapy
- Chelation therapy
- Sensory integration training
- Auditory integration training
- Facilitated communication
Complementary and Alternative Medicine Therapies for Autism

- Current evidence present in medical literature does not support the use of CAM therapies as sole treatment of Autism
- Some CAM therapies may be harmful (megadose vitamin/supplement therapy, chronic administration of antiviral agents, chronic use of antifungal agents, chelation therapy)
- More placebo-controlled, double-blind, randomized clinical trials need to study various CAM therapies for Autism
Autism is a neurodevelopmental disorder characterized by marked impairment in social interaction and communication and a restricted repertoire of activity and interests.

- No clear cause for autism
- Possible genetic and environmental interaction
- No cure for autism—Medications used to treat various symptoms found in autism
- Risperdal recently approved by FDA to treat aggressive and self-injurious behaviors in autistic children
- Current evidence present in medical literature does not support the use of CAM therapies as sole treatment of Autism
Resources for Families

- CAM Resources:
  - National Center for Complementary and Alternative Medicine (www.nccam.nih.gov)
  - The Longwood Herbal Task Force (www.mcp.edu/herbal/default.htm)

- Autism Resources:
  - Autism Society of America (www.autism-society.org)
  - National Institute of Mental Health (www.nimh.nih.gov)
  - Centers for Disease Control and Prevention (www.cdc.gov/ncbddd/autism/actearly)
  - Autism Speaks (www.autismspeaks.org)