EVMS EM & CHKD Peds EM Combined Journal Club

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Wolpert et al., **Medical Management of Children with Autism in the Emergency Department** Pediatr Emerg Care. 2022 Jul 1;38(7):332-336.

Back**ground:** Autism Spectrum Disorder has doubled in the US with 1 in 54 children with this diagnosis. More common in males with median age of diagnosis of 55 months. These children have impaired social communication, restrictive repetitive behaviors, and often hypersensitivity to sound, touch, smell and textures. Can be linked with other genetic conditions. These children are 4 times more likely to present to an ED and are particularly vulnerable to the challenges ED patients confront. This was a non-systematic review and CME activity with objectives that included ways to advance knowledge regarding identification, communication, medical evaluation, and behavioral changes.

Acute Visit Setting Models

1. The child- and family-centered care model. 6 themes:
    a. respect for the patient and family
    b. rapid assessment of the needs of the child
    c. wait time management
    d. control of the sensory environment,
    e. collaboration with caregivers
    f. responsiveness to care.[10]
2. "See-hear-feel-speak," model
    a. decrease aversive visual, auditory, and tactile stimuli,
    b. provide soothing tactile experiences
    c. encourage communication in concise, direct language.

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Intervention Techniques:

- The waiting room can be a challenge: if possible, offer a calm, quiet space or if the patient can wait elsewhere and be called when a room is ready
- Decreased stimulation once roomed- low traffic area, dimmed light, quiet
- Limiting the number of people in the room at once
- Behavioral incentives or somatosensory interventions- headphones, phones/tablets, weighted blankets, lip balms or markers, rocking chairs (whatever the patient wants)

Communication Techniques:

- Use the caregiver as an expert
- Communicate to the child through the caregiver
- Use direct instructions in small steps
- Proceed slowly and allow time for breaks
- Allow to stay in their clothing if possible
- Discuss plan for exam with caregiver and patient first
- If escalating, consider stopping and resuming once de-escalated

Specific Medical Concerns:

- Sedation:
    - May require procedural sedation for even routine problems
    - Generally well tolerated and do not require increased doses of medication
    - Adverse events equal to non-ASD patients
    - Ketamine and Versed most studied
    - Ask caregivers about what works- timing, delivery, meds
- GI issues:
    - Very common: abdominal pain, constipation
    - Hard to assess pain due to communication and altered pain sensitivity
    - Red flags: weight loss, significant vomiting or diarrhea, fever, focal pain, bleeding
    - Constipation- limited diets, withholding behaviors
    - Clues: change in behavior- grimacing, self-injury, gait change

    - Rectal exam?
    - Treatment for constipation should be multifactorial
    - Think about nutritional deficiencies
- Seizures:
    - High rate of concomitant seizure disorder (one study estimated 12.1%)
    - Epilepsy one of the leading causes of death in ASD
    - Emergent management not significantly different than non-ASD

- Metabolic/Mitochondrial Disorders:
    - Inborn errors of metabolism estimated to be 5% of ASD
        - Ex: PKU and urea cycle disorders
    - Mitochondrial disorders: estimates 33-80% have labs suggestive of mito dysfunction
- Behavior changes
    - If significant behavior change from baseline, think of an organic cause→ UTI, AOM, injury, dental infection

Bottom Line: These patients are a challenge. Use their caregiver as an expert and utilize shared decision making. Give your patient the opportunity to be cooperative. Talk to the patient even if they are non-verbal. Have a higher index of suspicion of an underlying process with acute behavior changes. Keep yourself, your staff and the patient safe.

Questions/Experiences/Suggestions

1. Useful adjustments for those patients who are on the spectrum but at a higher level of function
2. Is there a role for premedication or advance notification from caregivers anticipating an ED visit?
3. How to best mitigate difficult encounters with patient caretakers.

TABLE 1. Diagnostic Criteria of ASD

1. Demonstrates deficits in 3 areas of social communication:
a. Deficits in social-emotional reciprocity
b. Deficits in nonverbal communication
c. Deficits in developing, manifesting, and understanding relationships
2. Demonstrates restricted, repetitive behaviors, interests, or activities in a minimum of 2 of the following areas:
a. Stereotyped or repetitive motor movements, use of objects, or speech
b. Insistence on sameness and inflexible adherence to routine
c. Restricted, fixated interests of abnormal intensity or focus
d. Hyperreactivity or hyporeactivity to sensory input
3. The symptoms must impair functioning
a. Level 1 severity: requires support
b. Level 2 severity: requires substantial support
c. Level 3 severity: requires very substantial support
4. The symptoms must be present in early developmental childhood
5. The symptoms are not better explained by global developmental delay or intellectual disability

Adapted from Augustyn and von Hahn[1] and Maenner et al.[2]