

IN THE NAME OF GOD



by dr Taghizadeh



- The autistic spectrum disorders (ASD) associated cognitive and neurobehavioral deficits
- Including deficits in socialization and communication, with restricted and repetitive patterns of behaviors
- The term of “autism” was not formulated until the 1970
- The symptom domains into two: *social-communication impairment and restrictive and repetitive behaviors*

CLINICAL FEATURES OF ASD



by dr Taghizadeh

RESTRICTED, REPETITIVE PATTERNS OF BEHAVIOR, INTERESTS, OR ACTIVITIES

- There is not necessarily an absolute lack of social behaviors, but social communication and interactions are clearly atypical for the individual's age and developmental level
- Behaviors range from total lack of responsiveness to other people to an oddly stilted interaction style or inappropriate approaches and attempts to interact
- Eye contact is diminished and usually is not responsive to another person's overtures or used to get someone's attention

RESTRICTED, REPETITIVE PATTERNS OF BEHAVIOR, INTERESTS, OR ACTIVITIES

- *Deficits in nonverbal communication behaviors are a hallmark of ASD*
- Expressive language ranges from essentially nonverbal to verbally fluent
- Nonverbal communication deficits can vary from a total lack of facial expressions and nonverbal communication to a lack of integration of gestures with verbal communication
- *Lack of pretend play or very repetitive “scripted” pretend play is a typical characteristic of children with ASD*

PERSISTENT DEFICITS IN SOCIAL COMMUNICATION AND SOCIAL INTERACTION



by dr Taghizadeh

PERSISTENT DEFICITS IN SOCIAL COMMUNICATION AND SOCIAL INTERACTION

- A common form of repetitive speech is echolalia, which may be immediate or delayed
- Immediate echolalia refers to immediate non-communicative repetition of words or phrases
- Delayed echolalia (or scripted speech) refers to the use of highly ritualized phrases that have been memorized, such as from television or overheard conversations
- Repetitive questioning and the persistent use of idiosyncratic phrases are other forms of repetitive speech

PERSISTENT DEFICITS IN SOCIAL COMMUNICATION AND SOCIAL INTERACTION

- Some children have stereotypical movements (e.g., Flurid hand-clapping or arm-flapping)
- Many autistic children are so preoccupied with “sameness” that little can be changed without prompting a tantrum or other expression of distress
- *Restricted and repetitive behavior may take the form of excessive preoccupation with special interests*



PERSISTENT DEFICITS IN SOCIAL COMMUNICATION AND SOCIAL INTERACTION

- Many children with ASD overreact or underreact to sensory input (such as pain or temperature) or may be interested in some sensory aspects of their environment (e.g., Lights, patterns, or movement) to an unusual degree



ONSET PATTERNS IN ASD



by dr Taghizadeh

ONSET PATTERNS IN ASD

- The onset of ASD may occur early, with abnormalities in social and communication skills becoming apparent in the first year of life
- Children appear to develop normally until at least 12 months of age, followed by loss or regression of language and/or social skills
- The prevalence of regression in ASD is about 30%
- *Dramatic, rapid regression after a period of normal development, particularly after the age of 2 years and involving more than social communication skills, is rare and warrants a thorough medical evaluation*

ONSET PATTERNS IN ASD

- *Children who experience a regression with onset of symptoms of autism and an epileptiform EEG are to be differentiated from those with a diagnosis of landau-kleffner syndrome, an acquired aphasia associated with an epileptiform EEG, and from those with continuous spike waves during slow wave sleep (CSWS)*
- Children with autistic regression have an earlier age of onset and are less likely to have bilateral, temporal EEG patterns, or electrical status during sleep

SCREENING AND DIAGNOSTIC EVALUATION FOR ASD



SCREENING AND DIAGNOSTIC EVALUATION FOR ASD

- ASDs can be reliably diagnosed in children in the second year of life
- *Early intervention has proven to be beneficial to social and communicative function*
- “Red flags” for critical delays in social communication development can be recognized or queried and should initiate prompt evaluation for an ASD

BOX 57-2 Red Flags for Social Communication Development

Prompt evaluation should occur for any of the following:

No vocalizations by 6 months

A parent should be able to have a reciprocal "conversation" by this age, consisting of at least several volleys back and forth.

No polysyllabic consonant babbling by 12 months

At least some of these vocalizations should be directed at someone with communicative intent.

No gestures by 12 months

The earliest gesture an infant learns is to raise his/her arms to request to be picked up, usually once sitting independently.

Pointing should be with an isolated index finger, not the whole hand, and should be used "to request" or "to show," not just pointing at pictures in a book or pointing to have an adult label items.

Any use of hand-over-hand by the child, e.g., putting a parent's hand on the cabinet door where the cookies are kept or using the parent's hand to point at pictures in a book, is a hallmark of ASD.

No spontaneous (not echoed) single words by 16 months other than *mama* or *dada*

Spontaneous words must be beyond those used to simply label items and must be used by the child to communicate, to request, to show, or to share.

No spontaneous (not echoed) phrases by 24 months or sentences by 36 months

Spontaneous phrases and sentences must be used by the child to communicate, to request, to show, or to share.

Any loss of social communication abilities, including babbling, single words, phrases, response to name, social engagement, or gestures

If a parent reports their infant has decreased or stopped any social communication milestones, this is usually the hallmark of the onset of regression.

DIAGNOSTIC INSTRUMENTS FOR ASD

The modified checklist for autism in toddlers (MCHAT):

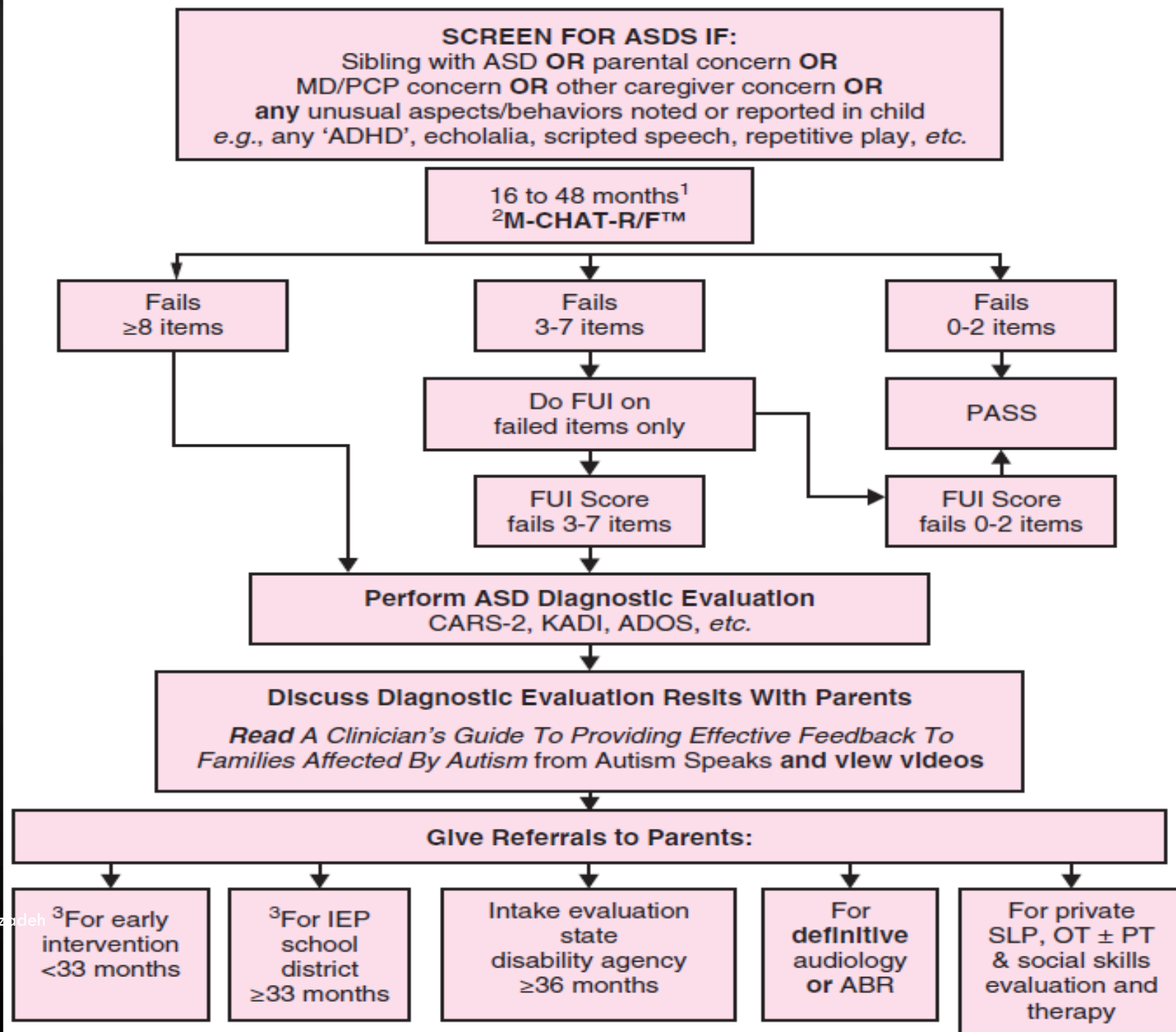
- Have 20 questions
- For use between 16 and 30 months
- Parent-completed tool
- Eight or more items missed means to proceed directly to referrals

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چک لیست اصلاح شده برای ارزیابی اتیسم در کودکان - نسخه ی تجدید نظر شده (M-CHAT-R)

لطفاً به سوالات زیر که در مورد رفتارهای کودکان است پاسخ دهید. هنگام پاسخ دادن به سوالات به یاد داشته باشید که آنچه که کودکان معمولاً انجام می دهند را مد نظر قرار دهید. اگر برخی از رفتارهایی که در این چک لیست به آنها اشاره شده است را فقط یکی - دو بار در کودکان مشاهده کردید ولی کودکان همیشه این رفتارها را نشان نمی دهند، گزینه "خیّر" را انتخاب کنید. لطفاً به تمام سوالات یا انتخاب گزینه "گری" یا "خیّر" پاسخ دهید.

خوب	1- آیا رانیکه به چیزی در گوشه ای از اتاق اشاره می کند، کودکان به آن شی نگاه می کنند؟ (به عنوان مثال وقتی به یک اسباب بازی و یا حیوان اشاره می کنید، کودکان به آن اسباب بازی یا حیوان نگاه می کنند)	آری	خوب
خوب	2- آیا تا به حال کرده که کودکان ممکن است ناشنوا باشد؟	آری	خوب
خوب	3- آیا کودک شما بازی های جانی و کشویی یا ساختگی انجام می دهد؟ (به عنوان مثال، ورمود کند که از لیوان خالی آب می خورد، ورمود کند یا نقاشی می کند یا ورمود می کند که به فروسک یا حیوانات عروسکی غذا می دهد)	آری	خوب
خوب	4- آیا کودک شما بالا رفتن از اشیاء را دوست دارد؟ (به عنوان مثال، بالا رفتن از سله و سطل پارک یا پله ها را دوست داشته باشد)	آری	خوب
خوب	5- آیا کودک شما با انگشتانش حرکات غیر عادی در جلوی چشمش انجام می دهد؟ (به عنوان مثال انگشتش را نزدیک چشمش دائماً نگاه دارد)	آری	خوب
خوب	6- آیا رانیکه کودک شما چیزی را می خواهد یا نیاز به کمک دارد از انگشت خود برای اشاره کردن استفاده می نماید؟ (به عنوان مثال به خوراکی یا اسباب بازی که دور از دسترس او قرار دارد اشاره می کند)	آری	خوب
خوب	7- آیا کودک شما با اشاره کردن چیزهایی که برایش جالب است را به شما نشان می دهد؟ (به عنوان مثال به جویبیا در آسمان اشاره کند یا به کامیونی که از خیابان رد می شود اشاره کند)	آری	خوب
خوب	8- آیا کودک شما به کودکان دیگر علاقه ای دارد؟ (به عنوان مثال کودکان دیگر را تعاداً کند یا به آنها لبخند بزند و یا با آنها همراه شود)	آری	خوب
خوب	9- آیا کودک شما با آوردن یک شی یا نگاه داشتن آن در مقابل شما (یعنی اینکه هدفش خونس آن شی باشد) بازی می کند یا آن شی را به شما نشان می دهد؟ (به عنوان مثال یک گل یا حیوان عروسکی و یا کامیون اسباب بازی را به شما نشان دهد)	آری	خوب



DIAGNOSTIC INSTRUMENTS FOR ASD

The communication and symbolic behavior scales developmental profile (CBS DP):

- Parent-complited
- For children from ages 9 to 24 months

The social communication questionnaire (SCQ):

- Parent-complited
- For children 4 years old and older



DIAGNOSTIC INSTRUMENTS FOR ASD

The Childhood Autism Rating Scale (CARS):

- From age 2 years
- Takes 5-15 min

Standard Version Rating Booklet (CARS-2-ST):

- Between 2-6 years of age or
- Communication difficulties or
- Lower than average estimated IQ

High-functioning Version Rating Booklet (CARS 2_HT)

- From 6 years of age and older, with IQ scores higher than 80

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DIAGNOSTIC INSTRUMENTS FOR ASD

The Gilliam Autism Rating Scale-3rd edition (GARS-3):

- For aged 3-22 years
- Sensitivity and specificity are 97%

The Combined of the Semistructured Autism Diagnostic Observation Schedule™—second edition (ADOS-2) and the Autism Diagnostic Interview™—Revised (ADI-R) a structured parent interview, are the gold standard for the diagnosis of autism in research settings

- Requiring a 2 day training workshop
- Takes 45-60 min for the ADOS-2
- Takes 90-150 min for the ADI-R

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مقیاسی استاندارد تشخیص ASD

نام و نام خانوادگی: _____ تاریخ: _____

این مقیاس برای تشخیص ASD در کودکان و بزرگسالان استفاده می‌شود. این مقیاس شامل 10 بخش است که در جدول زیر آمده است:

ردیف	بخش	تعداد سوالات	نوع سوالات
1	توجه	10	چهارگزینه‌ای
2	توجه به اشیاء	10	چهارگزینه‌ای
3	توجه به افراد	10	چهارگزینه‌ای
4	توجه به اشیاء و افراد	10	چهارگزینه‌ای
5	توجه به اشیاء و افراد (تجزیه و تحلیل)	10	چهارگزینه‌ای
6	توجه به اشیاء و افراد (تجزیه و تحلیل)	10	چهارگزینه‌ای
7	توجه به اشیاء و افراد (تجزیه و تحلیل)	10	چهارگزینه‌ای
8	توجه به اشیاء و افراد (تجزیه و تحلیل)	10	چهارگزینه‌ای
9	توجه به اشیاء و افراد (تجزیه و تحلیل)	10	چهارگزینه‌ای
10	توجه به اشیاء و افراد (تجزیه و تحلیل)	10	چهارگزینه‌ای

جمع امتیاز: _____

توضیحات: _____

RECOMMENDATIONS FOR A CHILD WITH NEWLY DIAGNOSED ASD



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RECOMMENDATIONS FOR A CHILD WITH NEWLY DIAGNOSED ASD

- Definitive hearing evaluation, either audiology or auditory brainstem responses
- For a child 36 months of age and older, refer the child for an intake evaluation at the state's agency for developmental disabilities

THE NEUROLOGIC EVALUATION IN AUTISM



THE NEUROLOGIC EVALUATION IN AUTISM

- Large head size and somatic overgrowth:

Head circumferences in children with ASD are shifted upward, with the mean approximately at the 75th percentile,

- Motor disturbances in tone, gait, praxis, and stereotypies:

Hypotonia

Localized to abnormal cadence, and hip and ankle kinematics and kinetics

Motor dyspraxia and motor stereotypies

CLINICAL TESTING



by dr Taghizadeh

CLINICAL TESTING

Definitive evaluation of hearing and vision

- Definitive audiological evaluation or brainstem auditory-evoked potential testing should be performed in all children with autism
- ASD has been associated with congenital blindness

Lead level

- Children with developmental delay who spend an extended period in the oral-motor stage of play are at increased risk for lead toxicity

Electroencephalography

- Epileptiform EEG abnormalities and interictal discharges have been reported in children with ASD (up to 30%) but do not typically correlate with clinical seizure activity

CLINICAL TESTING

Neuroimaging studies

- If there is neurologic evidence of lateralizing signs or other critical symptomatology, MRI indicated

Metabolic testing

- Metabolic screening is indicated only in the presence of suggestive clinical and physical findings

Genetic consult

- There has been substantial evidence linking ASD to a pattern of familial inheritance, with heritability ranging from 55% to 90%

COEXISTENT MEDICAL CONDITIONS



THANKS FOR YOUR ATTENTION

