Pervasive Developmental Disorders (PDD)

Autism Spectrum Disorder (ASD)
## Classification CIM 10/DSM-IV

### Troubles Envahissants du Développement

<table>
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<th>Autisme infantile</th>
<th>Autisme atypique</th>
<th>Syndrome de Rett</th>
<th>Autres troubles désintégratifs de l’enfance</th>
<th>Hyperactivité associée à un retard mental et à des mouvements stéréotypés</th>
<th>Syndrome d’Asperger</th>
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Autism Syndrom Tripod

Before 36 months

SOCIAL INTERACTION

COMMUNICATION

INTERESTS & BEHAVIOUR
• A marked alteration in the use of non verbal behaviour to regulate interactions.

• Incapacity to establish relationships with peers at the same level of development

• A lack of socio-emotional reciprocity

• Doesn't spontaneously share interests, pleasures or successes.
• Absence or delayed oral language.
• Incapable of engaging in or maintaining a conversation.
• A stereotypical or repetitive use of idiosyncratic language
• No spontaneous and varied pretend play
 Restricted and stereotypical centres of interest
 • Use of specific, repetitive and non functional rituals
   • Repetitive movements and motor mannerisms
 • Preoccupied by the small parts of objects
The ASD in DSM 5

- A single term encompasses all disorders Autism Spectrum Disorder
- ASD = Concept to emphasize:
  - The great variability of individual symptoms
  - The specificity of social development disorders
The ASD in DSM 5

• The clinical diad replaces the clinical triad: Alteration of social communication (social interactions + communication)

• Restricted, repetitive and stereotyped character of behavior, interests and activities. Delay or abnormal functioning observed before 3 years.

• Level of severity defined according to the intensity of the support necessary for the person for its autonomy.
The Sensory characteristics

- In the new classifications (DSM5), takes the place of a symptom:
  - Different perception of environmental stimulation
  - Hypo-reactivity / non-discriminating treatment
  - Hyper-reactivity / irritability
  - Difficulty combining several senses at the same time
  - Inter-modal transfers
ASSOCIATED DISORDER ASSESSMENT

- Mental retardation: 70% of the cases, variable degree.
- Anxiety and fear and massive phobias: 80% of the cases
- Deficit disorder of the attention: 2/3
- Motor disturbance
- Epilepsy (20%) hearing impairment (11%) visual impairment: strong (3.7%) moderate (19.3%)
- Self injury
- performance islands
Epidemiological data

- Frequency - incidence
  - 2009 (less than 20 years old)
    ✓ All PDDs: 6 - 7 out of 1000
    ✓ Child autism: 2 out of 1000
    ✓ PDD with mental retardation: 2 or 3 out of 1000

- Increase in frequency
  - Modification of the criteria for diagnosis
  - Improvement in professionals identifying the disorder
  - Development of specialised services
Risk factors

- ASD present in all CSPs
- Sex ratio for child autism
  - 4 times more frequent in boys than in girls
  - less high when backwardness is moderate to severe (2 boys for 1 girl)
- less risk of child autism depending on the age of the parents (the risk is multiplied by 1.3 when the mother is over 35 years old; a risk of 1.4 when the father is over 40 years old)
- pre and perinatal history is more important for ASD than for the general population
- Risk for siblings:
  - for a child born to a family who already has a ASD child: 4% if the affected child is a boy and 7% if the affected child is a girl
  - higher for a family that already has 2 children with ASD (25%-30%)
• problems sleeping: for 45% - 86% of children with autism
• psychiatric problems: 50% - 75%
  - difficult to detect in people with ASD or mental retardation (MR)
  - Adults with PDD-and MR: anxiety and depression (more frequent)
  - Children: The overdrawn disorder of the attention/hyperactivity (more frequent)
• Possibility of a psychiatric pathology (delirium or spates of delirium; schizophrenia) need further research
  • Epilepsy: between 5% - 40%
    - risk higher for women when MR
    - frequency: first peak pre school; second peak during adolescence
  • RM- prevalence varies according to type of ASD
    - no MR in Asperger syndrome
    - in child autism: 70%
A particular cognitive-sensory functioning
Cognitive features of PDD

- Cognitivist approach
  - a central unity: the brain
  - applications: the cognitive functions
  - periphery: the 5 senses
  - data: the perceptions
The strength of central coherence

- an innate capacity to organise perceptions and information, to find a structure in them to treat on a hierarchical basis them according to the context
  - the brain of a person with ASD doesn't use its associated neurons to filter, sort and, most importantly, prioritizing information
  - CONSEQUENCES: cognitive characteristics
    - Neurotypical people: the context gives meaning to things
    - People with ASD live in a "multiverse" = a world made of many details that have no relation to each other and have no single meaning = their literal meaning

"Autistic people notice each leaf on a tree without being able to see the whole tree" (N. Minshew)
What's this?
... a doll.
... a bed.
... a quilt.

... and what's this?
A piece of Ravioli.
The Theory of Mind (TM)

• TM: an essential cognitive function allowing a way of imagining the thoughts and feelings of others

• ASD: major difficulties in even the possibility of there being a difference between mental representations of a person, their believes and those of others

• Therefore, almost impossible to
  - derive logical conclusions and deductions
  - predict behaviour in others
THE DYADIC RELATIONSHIP

The intentionality detector

proto-déclarative pointing (initiation and response)

Joint Attention

The direction of look detector

TRYIADIC RELATIONSHIP

THE THEORY OF MIND
the « meta-representation » space
The executive functions

- All the mental processes that are involved in resolving problems.
  - are mainly found in the frontal lobe
  - are considered as the highest level of functioning in human behaviour

- NB / a disorder in executive functions is not specific to ASD
The executive functions

- Planification
- Inhibition
- Memory work
- Flexibility
The perceptive function

- the idea that people with PDD see in a different grain
- Conséquences:
  - Great capacity of discrimination
  - attention is attracted towards the local and physical aspects of information (details) to the detriment of its global aspects
  - over-functioning of one sense to the detriment of others
  - Difficulty in combining several senses
  - Phenomenon of sensory irritation
The sensory characteristics

Study of Geneva, 1994 shows that people with EDD have sensory characteristics (hypo or hyper):

- 87% at the auditory level
- 81% at the visual level
- 70% at the tactile level
- 30% at the taste level
- 53% at the olfactory level
The sensory characteristics

We know the 5 senses well:

- Hearing System
- Olfactory system
- Taste system
- Visual System
- Touch system

But we often forget:

- Proprioceptive system
- Vestibular System
The proprioceptive system:
- Deep sensitivity, joint and muscle sensation
- Gives an awareness of the position of the body and the relationships between the different parts of the body
- Indicates strength and muscle size required for movement

The vestibular system:
- Movement, gravity, change of position and orientation of the body
- Self-regulation, maintenance of appropriate level of awakening
- Modulates other sensory systems
FULL CARE OF THE PERSON
BEHAVIOURIST METHODS

- **Introduction**
  - America of the North and Northern Europe
  - Systematic Work on competences:
    - Psychomotor skills
  - Cognitive
  - Social

- Indirect Rehabilitation of the behavioral problems: modification of the aberrant behaviors

- Early and intensive:
  - To cause total progress
  - long-term Improvement of the evolution

- Important participation of the family
ABA Method

I
- Based on the theory of the training of Skinner (1953)
  - ABA Method (Applied Behavior Analysis)
  - Understand in what the environment influences the behaviors
  - Develop strategies to change inappropriate behaviors
- Improvement of the social behaviors
ABA METHOD

- **Common characteristics**
  - Focusing on the same fields of competences
    - Taken into account of environmental stimulations
    - Capacities of imitation
    - Use of the language in its two sides
    - To play or use objects in a suitable way
    - To interact socially with others
  - Trainings in a very structured context
  - Use of strategies to allow them changes
  - Active Implication of the family
ABA METHOD

In short, programs with behavioral reference

- Principles of the operative training
  - Analysis
  - Modification
- Develop socially acceptable behaviors
- Reduce inappropriate behaviors
- Mainly intended to the young children (between 2 and 6 years)
EDUCATIVE METHODS
TEACCH Program

- Treatment and Education of Autistic and Communication Handicaped Children
- Autism
  - Is not due to a parental pathology
  - Probable result of a cerebral dysfunction with organic origin
  - Opposite attitude with B. Bettelheim
TEACCH Program

- Basic principles
  - Strong collaboration family/professional
  - Diagnostic assessment
  - Individualized Project
  - Specialist education with autistic symptomatology
  - Reception facilities
  - Employment aid for the adults...
TEACCH Program

- Adapted program
  - Needs
  - Interests
  - Competences
- Recognition of differences
  - Inter-individual
  - Intra-individual
- Strong Interest about person’s competences
TEACCH Program

- Strong interest about person’s competences
- Strengths
- Weakness
- Emerging competences
- Use of psy test: PEP-3 / AAPEP
To aim for the integration: the structuring environment
To STRUCTURE?

- Need for adapting the environment in order to make it understandable
- To discipline its language
- To use visual aids
- To structure space
- To structure time
- To structure the activities
- To propose an individualized accompaniment
To simplify to the maximum verbal instruction
- Avoid double instructions
- Do not hesitate to repeat (loss of the sound trace)
- Include the person in the collective instructions
- Ask for joint attention (glance + listening if possible)
- Underline what is important (difficulty of sorting out and recycling)
- Use of the pictograms or the written language
Transmit clear messages
Say to the person what he must do precisely, rather than what he doesn’t have to make:
“go slowly” rather than “do not run”
Precisely congratulate the person on what he made a success of:
“cheer, you folded the linen well”
Clarify its own mental states while avoiding being irritated:
“look at me, I am annoyed, it is interdict to strike”
VISUAL AIDS: FOR A BETTER UNDERSTANDING

Why?:
- Speech difficulty in its various aspects
- But: good capacities of visual discrimination, "visual thinkers" (Grandin Temple)
- Assistance to better understanding the instructions, situations, progress of the activities...
- Allows the permanence of what is said
- Allows the nonverbal one’s expression
STRUCTURING THE FRAMEWORK

Why?

- Disturbances of the information processing (cognitive characteristics)
- Incoherent, unforeseeable character and distressing environment
- Behavioral problems
TIME STRUCTURING

▶ Why?
  - Difficulties of locating itself in time
  - Difficulties of apprehending the succession of the activities
  - Difficulties of anticipating
  - Difficulties of estimating the durations

▶ How?
  - Multiplication of ritual and routines
  - Visualized Timetable
  - Visualization of the durations
TIME STRUCTURING

- Timetable
- Structuring of the week, the day, half-day or of an activity... according to needs and autonomy level of the person
- Predictability = security
- Permanence of the instruction
- Support autonomy
- “obligation” since it is written
- Less behavioral problems
TIME STRUCTURING

- Give priority to regular timetables, routines, rituals
- Warn the person of the possible changes
- To envisage an “unforeseen” picto
- The picto “to wait” makes it possible to avoid crises related to uncertainty
- Impose a time of end of the activity
- Allow short breaks (not eviction but attentional relief)
ADOLESCENCE GENERAL STUDIES

- Contrasted evolution: clear progression for some. Frequent regression (behavioral symptoms - social operation).
- Physical and sexual maturation and “features” of adolescence.
- Occurred possible of depressive elements
- In the absence of mental retardation: possible schooling but obstructed by cognitive constraints (difficulties of abstraction), difficulties of planning, of comprehension and of answer of the educational requirements
ADULTS GENERAL STUDIES (1)

- Possible development of the relations to others but friendly relations or in love problematic.
- Daily autonomy worse than persons with same intellectual level.
- Stability of verbal, intellectual and emotional competences.
ADULTS GENERAL STUDIES (2)

- 5 to 20%: social life close to the normal.
- 15 to 30%: average adaptation, personal autonomy, work within protected framework
- 40 to 60%: limited in social life, incapacities of degrees variables for personal autonomy.
- Language for more than 50%, with characteristics
- Stability of the diagnosis, but in 14%, sufficient progress in social relations so that diagnostic criteria are not present any more (Rutter)
Remerciements

Les informations et illustrations présentés dans ces slides proviennent essentiellement des outils et supports

- Du CRA de Montpellier
- De l’ANCRA (Association Nationale des Centres de Ressource Autisme)

On trouvera également des références aux Recommandations de Bonnes Pratiques Professionnelles de l’ANESM et de la HAS

ANESM: Agence nationale de l’évaluation et de la qualité des établissements et services sociaux et médico-sociaux

HAS: Haute Autorité de Santé