Mental Retardation

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Mental Retardation

- Behavioural syndrome
- Not a unitary concept but represents wide spectrum of abilities, clinical presentations and Behavioural patterns
- No unique personalities or Behavioural patterns but certain patterns are frequently seen in certain MR syndromes
- All maladaptive behaviours are not due to MR or organicity but may be reactions to environment

- **Mental retardation** refers to substantial limitations in present functioning. It is characterized by significantly sub average general intellectual functioning existing concurrently with related limitations in two or more of the following applicable adaptive skills areas: communication, self-care, home living, social skills, self-direction, health and safety, functional academics, leisure, and work. Mental retardation manifests before age 18.

- Significantly Sub average Intellectual Functioning (An IQ score of 70 or below i.e. 2 SD below normal)

American Association on Mental Retardation, United States, 1992 (AAMR, 1992)

This definition is based on four assumptions:

(1) Valid assessment considers cultural and linguistic diversity, as well as differences in communication and behavioral factors;

(2) The existence of limitations in adaptive skills occurs within the context of community environments typical of the individual's age peers and is indexed to the person's individualized needs for support;

(3) Specific adaptive limitations often coexist with strengths in other adaptive skills or other personal capabilities;

(4) With appropriate supports over a sustained period, the life functioning of the person with mental retardation generally will improve

AAMR definition relies upon a multidimensional approach to describing individuals and evaluating their responses to present growth, environmental changes, educational activities, and therapeutic interventions:

Dimension I: Intellectual functioning

Dimension II: Adaptive skills

Dimension III: Psychological/emotional considerations

Dimension IV: Physical/health/etiological considerations

Dimension V: Environmental considerations

Clinical features

- language delay and motor development significantly below norms
- delays in motor-skill development as mobility, body image, and control of body actions.
- below norms in height and weight,
- more speech problems
- higher incidence of vision and hearing impairment
- problems with attention, perception, memory, problem-solving, and logical thought.

Mild	moderate	severe	profound
75-90%	10-25%	10-25%	10-25%
IQ- 50- 70,1/2 to 2/3 of CA	IQ- 35-49, 1/2 to 1/3 of CA	IQ- 20-34, 1/3 to 1/5 of CA	IQ- less than 20, 1/5 of CA
Slow all areas	Delay esp speech	Marked delay, may walk late	Significant delay
No stigmata	Abnormal physical signs	Little or no communication skills	Congenital anomalies
Can have practical skills	Learn simple communication	Repetitive tasks & daily routine	Need close supervision
Up to 3rd to 6th class education	Elementary health & safety habits	Simple self care	Need attendant care
Conform socially	Simple activities, self care	Need care & supervision	Regular physical activity, stimulation
Acquire vocational skills &self care	Simple activities under supervision		Cant take self care
Integrated into society	Travel alone to familiar places		

Causes -Prenatal

- Genetic – Tuberous Sclerosis
  Phenylketonuria
- Chromosomal abnormalities- Down's Syndorme
  Fragile X syndrome
  Prader- Willi
- Brain malformation- Neural Tube defect
- Infections- HIV, TORCH
- Toxins- Foetal alcohol syndrome,
  Anticonvulsants

Perinatal

- Infections- Encephalitis
- Delivery- Neonatal asphyxia

  Extreme Prematurity
- Others – Blood group incompatibility with hyperbilirubinemia

Postnatal

- Infections- Encephalitis

  Meningitis
- Toxins – Lead Poisoning
- Trauma – Head trauma
- Inborn errors of metabolism- Phenylketonuria

  Galactosemia
- Endocrine- Hypothyroidism
- Psychosocial causes- Malnutrition

  sociocultural deprivation

  Low parental IQ

  Poor parenting skills

Co morbidity

- CNS – Cerebral palsy(static encephalopathy)
  - Seizure disorder
  - Sensory impairement (Visual, auditary)
  - Stereotypic movement disorders – SIB
- Mental Disorders- PDD
  - ADHD
  - Pica
  - Schizophrenia & other psychosis
  - Mood disorders
  - Anxiety disorders
  - Personality disorders
  - Adjustment disorders

Assessment

- Dimension I - Intellectual abilities

  Tools – (To be discussed)

- Dimension II – Adaptive behaviour – conceptual, social , practical skills

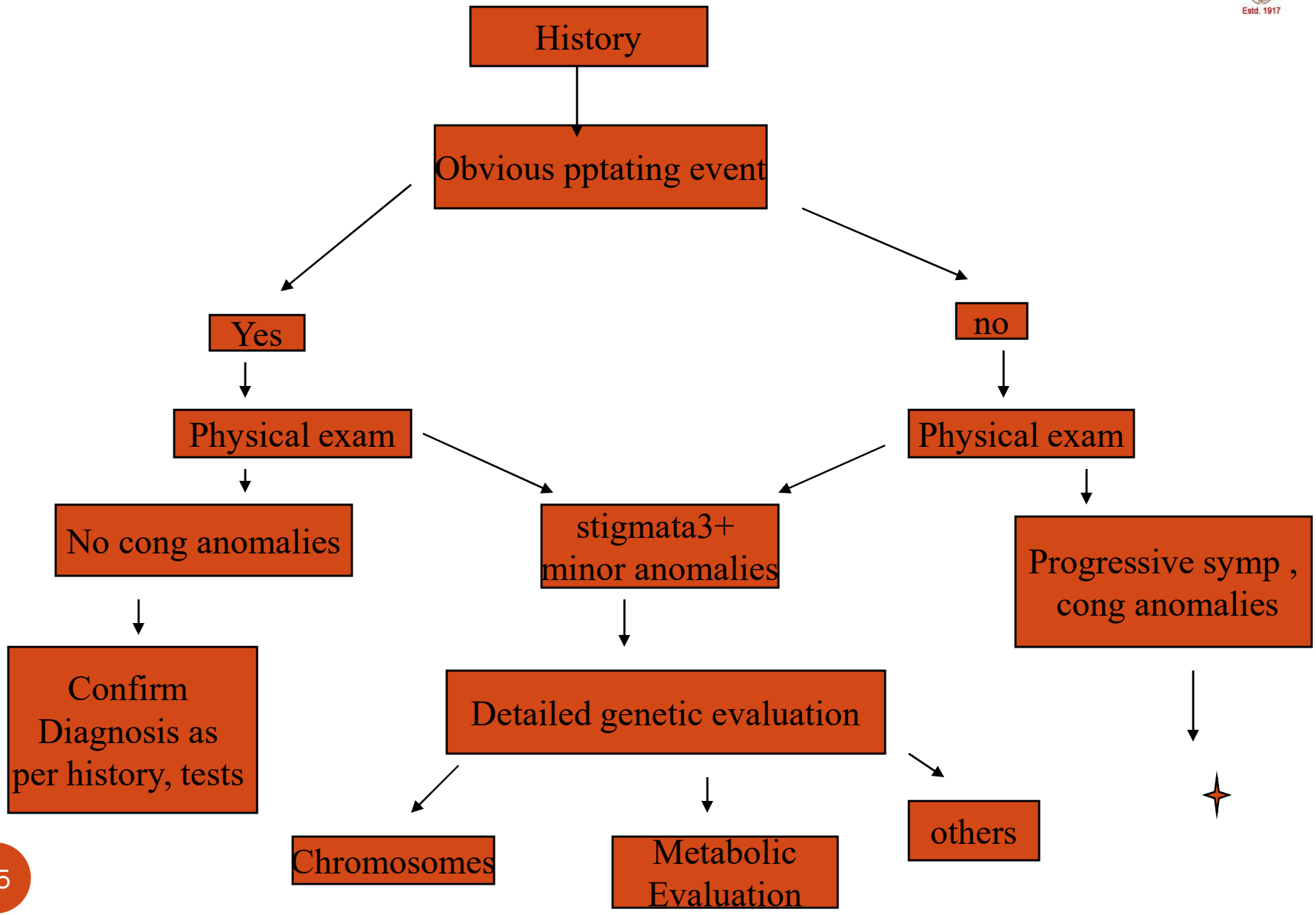
  Tools – VSMS, AAMR Adaptive behaviour scale, history, direct observation

- Dimension III – Participation, Interaction, social roles
- Dimension IV – Health – Physical, Mental health with aetiological factors
- Dimension V – Context – Environment, culture

Tools for Dimension I

- Weschler Intelligence scale (WAIS-R, WISC-III, WPPSI-R)
- Stanford Binet tests,
- Limitation- Cultural deprivation not considered, unreliability in IQ<50
- Binet Kamat (Verbal Intelligence)
- Vineland Social Maturity Scale (VSMS)
- Gessell, Illingworth and Knobloch – screening
- DAPT- visual motor coordination
- BG and Benton visual retention test- brain damage

- Ravens Progressive matrices (Non verbal problem solving)
- Seguin form board (performance)
- British picture vocabulary scale (Dunn et al 1997)
- Weschler abbreviated scale for intelligence (1999)
- Flynn effect
- Scatter analysis


History
Obvious pptating event
Yes
no
Physical exam
Physical exam
No cong anomalies
stigmata3+ minor anomalies
Progressive symp , cong anomalies
Confirm Diagnosis as per history, tests
Detailed genetic evaluation
Chromosomes
Metabolic Evaluation
others

- Metabolic Screen- amino acids, organic acids, lactate, pyruvate, thyroid, lead, CBC, triglycerides, urine mucopolysaccharide screen
- Imaging- CT scan, MRI, Head ultrasound, long bones and wrist.
- FISH – fluorescent in situ hybridization
- DNA studies

Course and natural history

- Life expectancy depends on – severity of MR, environmental factors including general health, cognitive abilities, co morbidities.
- Delay in diagnosing co morbidities
- Frequent infections
- SIB

Goals of treatment

- Treatment of underlying disorder/ cause
- Treatment of co morbidity
- Interventions targeted at functional disability-

  Educative

  Habilitative

  Supportive approaches
- Prevention

Needs

- Social network/ support
- Disabilities related- cognitive, specific learning, sensory stimulation, language development, medical
- Skills- self care, communication, social interactions, recreation, self direction, social skills
- Therapies- medical, language, physical, occupational, vocational
- Opportunities- work and education, social, recreation

AAMR- supports

- concept of supports, as described by AAMR, refers to certain resources and strategies provided to persons with mental retardation that enhance their independence/interdependence, productivity, community integration, and satisfaction
- Supports can be grouped into eight types of function:

  (1) befriending, (2) financial planning, (3) employee assistance, (4) behavioral support, (5) in-home living assistance, (6) community access and use, (7) health assistance, (8) teaching **(Schalock et al., 1994).**

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concept of supports includes assigning one of four levels of intensity to each support:

(1) intermittent, or "as needed," which are seen as short-term supports, such as during an acute medical crisis;

(2) limited, which are those supports needed regularly, but for a short period of time, such as employee assistance to remediate a job-related skill deficit;

(3) extensive, seen as ongoing and regular, such as long-term home living support;

(4) pervasive, viewed as constant and potentially life-sustaining, such as attendant care, skilled medical care, or help with taking medications.

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A three-step procedure for diagnosing, classifying, and determining the needed supports of an individual with mental retardation:

(1) determine eligibility for supports (IQ 70-75 or below, significant disabilities in two or more adaptive skill areas, age of onset below 18);

(2) identify strengths and weaknesses and the need for support across the four dimensions, intellectual functioning and adaptive skills; psychological/emotional considerations; physical/health/etiological considerations; and environmental considerations;

(3) identify the kind and intensities of supports needed for each of the four dimensions.

Educational implications

- hands-on materials are more meaningful than pictures and demonstrations more instructive than verbal directions
- breaking longer, new tasks into small steps; and prompting or shaping accurate performance
- develop rules and provide opportunities for them to apply or transfer what they have learned
- shorter and distributed (not massed) learning sessions
- early age, life skills including daily living, personal/social skills, and occupational awareness and exploration should be taught
- educational program along with vocational preparation and training for adult living

Thank you…