MENTAL RETARDATION

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Mental retardation (MR) is a generalized disorder appearing before adulthood, characterized by significantly impaired cognitive functioning and deficits in two or more adaptive behaviors.

- It has historically been defined as an Intelligence Quotient score under 70.

CAUSES OF M.R.

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An intelligence quotient, or IQ, is a score derived from one of several different standardized tests designed to assess intelligence.

- Causes Of Mental Retardation
  1. Prenatal
  2. Natal
  3. Postnatal

CAUSES OF M.R.

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(1) Prenatal

- Chromosomal disorders; Down syndrome, Fragile X syndrome, Klinefelter syndrome
- Single gene disorders; Inborn errors of metabolism, such as galactosemia, phenylketonuria.
- Brain malformations such as microcephaly, hydrocephalus

CAUSES OF M.R.

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(2) Natal

- Adverse material / environmental influences;
  - deficiencies such as iodine deficiency and folic acid deficiency
  - Using substances such as alcohol, Exposure to other harmful chemicals such as pollutants, heavy metals, drugs, Infections egTORCH, HIV / B
- Third trimester (late pregnancy); Diseases in mother such as heart and kidney disease and diabetes, Placental dysfunction
- Labour (during delivery); Severe prematurity, very low birth weight, birth asphyxia, Difficult and/or complicated delivery, Birth trauma
CAUSES OF M.R.

• Neonatal (first four weeks of life); Septicemia, severe jaundice, hypoglycemia

(3) Postnatal (in infancy and childhood);
• Brain infections such as tuberculosis, Japanese encephalitis and meningitis, Head injury, Chronic lead exposure, malnutrition

Common features of Mental Retardation

• Delays in oral language development
• Deficits in memory skills
• Difficulty learning social rules
• Difficulty with problem solving skills
• Delays in the development of adaptive behaviors such as self-help or self-care skills

Early behavioral signs of M.R.

• Dystrophic features (e.g. down syndrome, fragile X syndrome).
• Irritability or unresponsiveness to contact.
• Abnormal eye contact during feeding.
• Gross motor delay.
• Decreased alertness to voice or movement.
• Language difficulties or delay
• Feeding difficulties

Diagnosis

• According to the latest edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), three criteria must be met for a diagnosis of mental retardation;
  1. an IQ below 70
  2. evidence that the limitations became apparent before the age of 18
  3. significant limitations in two or more areas of adaptive behavior (as measured by an adaptive behavior rating scale, i.e. communication, self-help skills, interpersonal skills, and more)

Diagnosis

• History collection from parents & caretakers
• Physical examination
• Neurological examination
• Assessing milestones development
• Investigations
  – Urine & blood examination for metabolic disorders
  – Culture for cytogenetic & biochemical studies and Amniocentesis in infant with chromosomal disorders
  – Chorionic villus sampling
  – Hearing & speech evaluation

Diagnosis

• EEG, especially if seizure are present
• CT scan or MRI brain, for example, in tuberous sclerosis
• Thyroid function tests when cretinism is suspected
• Psychological tests like Stanford-Binet Intelligence Scale & Wechsler Intelligence Scale for Children’s (WISC), for categorizing the child’s level of disability.
Grades of MR

According to IQ:

- Profound mental retardation Below 20
- Severe mental retardation 20–34
- Moderate mental retardation 35–49
- Mild mental retardation 50–69
- Borderline intellectual functioning 70–84

Management

- By most definitions mental retardation is more accurately considered a disability rather than a disease.
- Currently, there is no "cure" for an established disability, though with appropriate support and teaching, most individuals can learn to do many things.

Management

- The mainstay of treatment for MR is developing a comprehensive management plan for the condition. This requires input from care providers from multiple disciplines, including special educators, language therapists, behavioral therapists, occupational therapists, and community services that provide social support and respite care for families affected by MR.

TREATMENT MODALITIES

- Behavior management
- Environmental supervision
- Monitoring the child’s development needs & problems.
- Programs that maximize speech, language, cognitive, psychomotor, social, self-care, & occupational skills.
- Ongoing evaluation for overlapping psychiatric disorders, such as depression, bipolar disorder, & ADHD.

TREATMENT MODALITIES

- Family therapy to help parents develop coping skills & deal with guilt or anger
- Early intervention programs for children younger than 3 with mental retardation
- Provide day schools to train the child in basic skills, such as bathing
- Determine the child’s strengths & abilities & develop a plan of care to maintain & enhance capabilities.

TREATMENT MODALITIES

- Monitor the child for physical or emotional distress.
- Modify his behavior by having him redirect his energy
- Teach the child adaptive skills, such as eating, dressing, grooming & toileting
- Demonstrate & help him practice self-care skills
- Work to increase his compliance with conventional social norms & behaviors
### TREATMENT MODALITIES

- Maintain a consistent & supervised environment.
- Maintain adequate environmental stimulation.
- Set supportive limits on activities.
- Work to maintain & enhance his positive feelings about self & daily accomplishments.

### CARE AND REHABILITATION OF MR

- The prevention and early detection of mentally handicaps.
- Regular assessment of the mentally retarded persons attainments and disabilities.
- Advice, support, and practical measures for families.
- Provision for education, training, occupation, or work appropriate for each handicapped person.
- Housing and social support to enable self-care.
- Medical, nursing, Psychiatric and psychological services those who require them as outpatients, day patients or inpatients.

### CARE AND REHABILITATION OF MR

- The family doctor and pediatrician are mainly responsible for early detection and assessment of mental retardation and assessment of mental retardation.
- The team providing continuing health care also includes psychologists, speech therapists, nurses, occupational therapists and physiotherapists.

### CARE AND REHABILITATION OF MR

- A few mildly retarded children require fostering, boarding schools placement or residential care.
- Mildly retarded adults may need help with housing, employment or with the special problems of old age.
- In case of severely retarded may require special services throughout their lives.

### Education and training

- The aim is that as many mentally retarded children as possible are educated in ordinary schools either in normal classes or in special classes.
- There is now an increasing use of more specialists teaching and a variety of innovative procedures for teaching language and other methods of communication.
- Before leaving school, these children require reassessment and vocational guidance.

### HINTS FOR SUCCESSFUL TRAINING

- Divide each training activity into small steps and demonstrate.
- Give repeated training in each activity.
- Give the training regularly and systematically.
- Starts the training with what the child already knows and then proceed to the skill that needs to be trained. By this the child will have a feeling of success and achievement.
- Rewards his efforts even if the child attains near success.
- Use the training material which is appropriate, attractive and locally available.
**HINTS FOR SUCCESSFUL TRAINING**

- Remember children will learn better from children of the same age.
- Remember there is no age limit for training a mentally retarded person.
- Assess the child periodically preferably once in a four or six months.
- Remember a mentally retarded child learn very slowly. Tell the parents not to be dejected at the slow progress, nor feel threatened by the child failure.

**CARE AND REHABILITATION OF MR**

Help for families is needed from the time the diagnosis is first made.
- When the child starts school the parents should not only be kept informed about this progress, but should feel involved in the planning and provision of care.
- Families are likely to need extra help when their child is approaching puberty or leaving school.

**NURSING MANAGEMENT**

**INTERVENTION:**

- The long term goals for these children are highly individualized and are dependent on the level of mental retardation. Parents should be involved in establishing realistic goals for their child. Some of these goals can be:
  - The child dresses himself
  - The child maintains continence of stool and urine
  - The child demonstrate acceptable social behavior
  - The adolescent participates in a structured work program

- Assessment of early infant behavior for cognitive disability (non-responsiveness to contact, poor eye contact and during feeding, slow feeding, diminished spontaneous activity, decreased responsiveness to surroundings, decreased alertness to voice or movement, and irritability).
- Documentation of daily living skills.
- A careful family assessment for information on the family’s response to the child, Presence of other members with impaired cognition in the family, Degree of independence encouraged at home, Stability of the family unit.

- Early intervention programs are essential to maximize the potential development.
- The nurse can participate in programs that teach infant stimulation, activities of daily living and independent self-care skills.
- In addition, learning social skills and adaptive behavior assists the child in building a positive self-image. For older children and adolescent assistance is needed to prepare them for a productive work life.
MR REHABILITATION CENTERS IN INDIA

- V.D. Indian Society for mentally retarded. Mumbai
- The Association for the Welfare of Persons with a Mental Handicap in Mumbai
- NATIONAL INSTITUTE OF MENTALLY HANDICAPPED has three regional centers located at New Delhi, Kolkata, & Mumbai,
- MITRA special school and vocational training center for the mentally retarded, Bengaluru, Karnataka.

Prevention

- Genetic: Prenatal screening for genetic defects and genetic counseling for families at risk for known inherited disorders can decrease the risk of inherited mental retardation

Prevention

- Social: Government nutrition programs are available to poor children in the first and most critical years of life. These programs can reduce retardation associated with malnutrition. Early intervention in situations involving abuse and poverty will also help

Prevention

- Toxic: Environmental programs to reduce exposure to lead, mercury, and other toxins will reduce toxin-associated retardation. However, the benefits may take years to become apparent. Increased public awareness of the risks of alcohol and drugs during pregnancy can help reduce the incidence of retardation

Prevention

- Infections: The prevention of congenital rubella syndrome is probably one of the best examples of a successful program to prevent one form of mental retardation. Constant vigilance, such as limiting exposure to cat litter that can cause toxoplasmosis during pregnancy, helps reduce retardation that results from this infection.

WHO intervention for prevention of Mental retardation:

- 1. The 2010 WHO Global strategy to reduce the harmful use of alcohol
- 2. WHO Framework Convention on Tobacco Control (WHO FCTC)
- 3. Comprehensive implementation plan on maternal, infant and young child nutrition
### Prevention

- 5. The Network for Improving Quality of Care for Maternal, Newborn and Child Health, launched by WHO and UNICEF
- 7. WHO recommendations on antenatal care for a positive pregnancy experience

### Prevention

- 8. Global Strategy for Women’s, Children’s and Adolescents Health 2016-2030
- 10. Water, sanitation and hygiene (WASH)

### National programmes for prevention of M.R.

- 1. National Iodine deficiency disorder control program
- 2. Measles and Rubella vaccination programme
- 3. The Pradhan Mantri Surakshit Matritva Abhiyan has been launched by the Ministry of Health & Family Welfare (MoHFW), Government of India. The program aims to provide assured, comprehensive and quality antenatal care, free of cost, universally to all pregnant women on the 9th of every month.

### National programmes for prevention of M.R.

- 4. Janani suraksha yojana and Janani sishu suraksha yojana for encouraging institutional delivery and newborn care
- 5. RBSK Rashtriya Bal Swasthya Karyakram for correction of deficiency, defect, disability and disease
- 6. National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke

### National programmes for prevention of M.R.

- 7. NTEP National Tuberculosis Elimination Programme and National AIDS Control Programme (NACP)
- 8. KM KUSHAL Mangal Karyakaram for high risk pregnancies
- 9. IDCF Intensified Diarrhoea Control Fortnight

### Can I ask some questions.....?

- Is mental retardation same as mental illness?
  - No, mentally retarded persons are not mentally ill. The mentally retarded persons are just slow in their development.

- Is mental retardation curable?
  - No, mental retardation cannot be cured. But timely and appropriate intervention can help mentally retarded person learn several skills.

- Is it true that the mentally retarded persons cannot be taught anything?
  - No, mentally retarded persons can be taught many things, but they need to be trained systematically. They can perform many jobs under supervision.
Can I ask some questions.....?

- Do mentally retarded persons become normal, as they grow older?
  - No. the mentally retarded persons mental development is slower than that of a normal person. Therefore when their actual age increases with time, the mental development does not occur at the same pace to catch up with the actual age.

- Is mental retardation an infectious disease?
  - No. Interaction between mentally retarded children and normal children on the other hand, helps in the improvement of mentally retarded children.

- Can marriage solve the problems of mentally retardation?
  - No. many people think that after marriage, the mentally retarded person will become active and responsible or sexual satisfaction will cure the person. That is not so. Marriage will only further complicate the problem. When it is known that a mentally retarded person cannot be totally independent, it will not be possible to look after his family.