Rehabilitation: special features of pediatric rehabilitation

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Special features of pediatric rehabilitation

- Developing functions, developmental disorders, congenital anomalies
- Cooperation (understanding goals, tasks)
- Parents
  - „proxy” problems
  - dependence
Children with special health care needs (with disabilities and chronic illnesses)

Children with special health care needs are those who have, or are at risk for, chronic physical, developmental, behavioral, or emotional conditions and who also require health and related services of a type or amount not usually required by typically developing children.
Main etiological categories causing disabilities

- Birth defects, genetically determined disorders

- Acquired disabilities
  - Neurotrauma
  - Brain damages of perinatal origin
  - Sequela of acute / chronic diseases
Children with developmental disorders and other disabilities eligible for early intervention or rehabilitation

- Cerebral palsy
- Mental retardation – Learning disability
- Visual Impairment
- Hearing impairment
- Behavioral problems
- Autism
- Neurological disorders frequently causing developmental problems: epilepsy, hydrocephalus, spina bifida (MMC), muscle dystrophy, spinal muscle atrophy, etc.
Children with other diseases, disorders and impairments eligible for early intervention or rehabilitation

- Neurotrauma (spinal cord, brain peripheral nerve injury)
- Neuropathic bowel / neurogenic bladder
- Burns
- Arthrogryposis
- Limb deficiency
- Osteogenesis imperfecta
- Spinal deformity
- „The medically fragile“ / the ventilator dependent child
Team

- PRM specialists in pediatric care
- Nurses
- Physiotherapists
- Ergotherapist
- Conductor
- Neuropsychologist
- Other specialists
- Assisting staff
- Special education teacher
- Teachers
- Speech therapist
- Hydrotherapist
- Social worker
- Dietetician
- Children and Parents
Muclulo-sceletal and connective tissue disorders burns
Types of therapies

- Physiotherapy (individual and in groups)
- Hydrotherapy
- Psychological support
- Special medical aids
  - Casts
  - Orthoses
  - Protheses

- Orthopedic surgery: pre and postoperative treatments
Feeding difficulties

Therapies for children with motor / multiple handicap and with LD

Physician: medical workout medicines

PT: positioning orofacial treatment

OT: positioning using special utensils, etc

Dietetician: calory intake

Psychologist: behavioral problems

Individual Therapy Plan (ITP)
Providing special seating and mobility device
Challenging problem:
Rehabilitation for technology-dependent children

Needs:
- 2 special beds
- 24 hours intensive nursing
- Consultation with specialists
- Respirators and accessories
- Criteria of referral
Treatment facilities in spasticity / cerebral palsy

Physiotherapy

Orteses

Serial casting

Chemical neurolysis: Botulinum-A toxin (BTX-A)

Electric stimulation

Selectiv dorsal rhisotomy (SDR)

Intrathecal Baclophen (ITB)

Orthopedic surgery
Therapy rooms

- PT rooms
- Ergotherapy room
- Psychology room
- Teaching rooms
- Multifunctional activity room
- Hydrotherapy
- Room for plastering
- Centralized:
  - gymnasium, electrotherapy,
  - ADL practising rooms, etc.
BURN Rehabilitation Team

Pain Management specialist
PRM specialist
Anaesthetists Intensivists
Nursing practitioners
PT Physical Therapists
OT Occupational therapist
Social worker
Orthotists prosthethist
Dietitians Nutritionists Psychologist
Reconstructive Surgeon
Oral Health specialist
PATIENT and FAMILY

Nursing practitioners
Anaesthetists Intensivists

Occupational therapist
Social worker
Orthotists prosthethist
Dietitians Nutritionists Psychologist
Reconstructive Surgeon
Oral Health specialist

Pain Management specialist
PRM specialist
Anaesthetists Intensivists
Nursing practitioners
PT Physical Therapists
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Reconstructive Surgeon
Oral Health specialist
Special issues
Children

Development: mental / physical
/ bone mass / power and
lean body mass

The factor age and the recovery of severely burned children

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Conclusion:
Patterns of recovery in pediatric burn patients are determined by age
Weight loss

Addressing severe muscle catabolism and wasting

• Improving lean body mass
• Improving strength

Growth hormone
Oxandrolone (combined with exercise)
Increased protein intake
Yenidunya classification of burn contractures

(1) Dynamic stage contractures
   (a) Acute contractures
   (b) Simple contractures

(2) Static stage contractures
   (a) Neglected contractures
   (b) complex burn contractures
   (c) complicated burn contractures
Classification of plantar contractures

1. Mild hypertrophic scar formation involves in very mild plantar flexion contractures of some toes
2. Moderate where less than three toes were significantly involved in plantar flexion contractures
3. Severe where three to five toes were involved with significant plantar contractures
4. Mutilated where all toes were involved in plantar flexion contractures with significant deformities
The areas to be addressed beyond medical approach

1. Education and further education
2. School leavers
3. Employment
4. Housing and home adaptations
5. Leisure interest
6. Finance and benefits
7. Legal problems
8. Carers
9. Ethics
Readings
