

LAQs on Cerebral Palsy by Dr. Dr. Vikas Ananda Deshmukh

1. A 4-year-old boy is brought to the orthopaedic OPD because of delayed walking and frequent falls. He walks on his toes with knees flexed and has difficulty climbing stairs. Birth history reveals prematurity at 32 weeks.

Questions:

- a) Define cerebral palsy. (2 marks)
 - b) Classify cerebral palsy. (2 marks)
 - c) Describe the clinical features of spastic diplegia. (3 marks)
 - d) Outline the principles of management and rehabilitation. (3 marks)
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2. Spastic (diplegia, hemiplegia, quadriplegia)

- Dyskinetic
 - Ataxic
 - Mixed
 - Clinical features:
 - Toe walking
 - Scissoring gait
 - Hypertonia
 - Hyperreflexia
 - Delayed milestones
 - Management:
 - Physiotherapy
 - Stretching exercises
 - Orthoses
 - Botulinum toxin
 - Tendon-lengthening surgery
 - Multidisciplinary rehabilitation
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2. A 6-year-old girl presents with weakness of the right upper and lower limbs since infancy. Her parents report that she prefers to use the left hand for daily activities.

Questions:

- Diagnose the condition.
- Discuss the causes and pathogenesis.
- Describe the gait abnormalities.
- Discuss treatment options.
- Expected answer:
 - Diagnosis: Spastic hemiplegic cerebral palsy.
 - Gait abnormalities:
 - Equinus deformity
 - Circumduction gait
 - Flexed elbow and wrist

- Treatment:
 - Physiotherapy
 - Occupational therapy
 - Splints
 - Botulinum toxin
 - Corrective surgery
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3. A 7-year-old child with cerebral palsy presents with toe walking and fixed equinus deformity of both feet.

Questions:

- Enumerate causes of equinus deformity in cerebral palsy.
 - Describe clinical examination.
 - Discuss indications for surgery.
 - Enumerate surgical procedures.
 - Expected answer:
 - Examination:
 - Range of motion
 - Silfverskiöld test
 - Muscle power
 - Spasticity grading
 - Surgical procedures:
 - Achilles' tendon lengthening
 - Gastrocnemius recession
 - Posterior release
 - Osteotomy (selected cases)
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4. An 8-year-old child with spastic quadriplegia presents with pain in the left hip and difficulty in sitting.

Questions:

- Explain why hip dislocation occurs in cerebral palsy.
- Describe clinical and radiological evaluation.
- Outline management.
- Expected answer:
- Causes:
- Muscle imbalance
- Adductor spasticity
- Investigations:
- AP pelvis radiograph
- Migration index
- Treatment:
- Physiotherapy
- Adductor tenotomy
- Varus derotation osteotomy
- Pelvic osteotomy

5. A 10-year-old child presents with progressive flexion deformity of hips and knees with difficulty in walking.

Questions:

- Define crouch gait.
 - Describe causes and pathomechanics.
 - Describe gait analysis.
 - Discuss management.
 - Expected answer:
 - Definition: Excessive flexion at hip and knee during stance phase.
 - Causes:
 - Hamstring spasticity
 - Weak plantar flexors
 - Management:
 - Physiotherapy
 - Orthoses
 - Hamstring lengthening
 - Single-event multilevel surgery
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6. A 5-year-old child has difficulty holding objects due to wrist flexion deformity and thumb-in-palm posture.

Questions:

- Describe upper-limb deformities in cerebral palsy.
 - Explain functional assessment.
 - Discuss treatment.
 - Expected answer:
 - Deformities:
 - Thumb-in-palm
 - Wrist flexion
 - Elbow flexion
 - Management:
 - Occupational therapy
 - Splinting
 - Tendon transfer
 - Soft tissue release
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7. A 7-year-old child has involuntary writhing movements, dysarthria and poor coordination.

Questions:

- Classify the type of cerebral palsy.
 - Discuss etiology.
 - Describe clinical features.
 - Outline management.
 - Expected answer:
 - Diagnosis: Dyskinetic (athetoid) cerebral palsy.
 - Features:
 - Involuntary movements
 - Dysarthria
 - Fluctuating tone
 - Treatment:
 - Physiotherapy
 - Speech therapy
 - Occupational therapy
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8. Parents of a 3-year-old child recently diagnosed with cerebral palsy seek advice regarding long-term rehabilitation.

Questions:

- Explain rehabilitation goals.
- Describe the role of physiotherapy.
- Explain orthotic management.
- Discuss family counselling and prognosis.
- Expected answer:
- Goals:
- Improve mobility
- Prevent contractures
- Enhance independence
- Rehabilitation team:
- Orthopaedic surgeon
- Physiotherapist
- Occupational therapist
- Speech therapist
- Psychologist
- Family counselling and social integration.
