

## CME Section

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If you have any questions, please email the Editor ([jneufeld@mail.cho.org](mailto:jneufeld@mail.cho.org)).

This is an adult learning experience and there is no requirement for obtaining a certain score. The objective is to have each participant learn from the total experience of studying the article, taking the exam, and being able to immediately receive feedback with the correct answers.

**CME on the Orthopedic Management of Mucopolysaccharide Disease****CME Article number 1:** *Klane K. White and Paul Harmatz*

## Questions

- 1) Which of the following descriptions of the growth plate in MPS is NOT true:
  - a) Growth plates are wider than normal.
  - b) The quality of cells in the reserve and proliferative zones is normal.
  - c) The zone of hypertrophy is hypercellular and demonstrates increasing disorganization.
  - d) The zone of provisional calcification is enlarged and disorganized.
  - e) Islands of remnant cartilage and erratic cortical bone formation are found in the primary spongiosa.
- 2) Cervical spine instability in MPS:
  - a) is a known cause of premature death in affected individuals.
  - b) is always evident on dynamic lateral cervical flexion-extension views.
  - c) is common in MPS II (Hunter Syndrome).
  - d) is defined by motion of < 5 mm between C1 and C2, on flexion extension radiographs
- 3) Thoracolumbar kyphosis is manifested by:
  - a) deficiency of the posterior/inferior vertebral body.
  - b) focal forward bend in the spine.
  - c) Schmorl's nodes.
  - d) three consecutive vertebrae wedged > 5 degrees.
- 4) General indications for surgery in thoracolumbar kyphosis in MPS include:
  - a) kyphosis of more than 40 degrees.
  - b) age greater than two years.
  - c) the presence of myelopathy.
  - d) the appearance of congenital kyphosis.
  - e) the presence of osteopenia.
- 5) Bracing for hip dysplasia in MPS I (Hurler Syndrome) is an effective form of treatment:
  - a) True
  - b) False
- 6) Which of the following about epiphyseal dysplasia in MPS is NOT true:
  - a) It has the appearance of osteonecrosis, or Perthe's Disease.
  - b) It is seen in MPS III, IV and VI.
  - c) It is amenable to surgical reconstruction (like acetabular dysplasia).
  - d) It may require prosthetic replacement (total hip replacement).
  - e) In the future, it may be treated using intra-articular anti-inflammatory medications.
- 7) For genu valgum (or knock-knees) in MPS:
  - a) It does not occur in children with MPS I after stem cell transplantation.
  - b) It can be treated by hemiepiphyseal growth modulation with Blount's staples or a tension band plate.
  - c) Staples or tension band plates can be used in children who are no longer growing.
  - d) Joint stiffness is improved by surgery.
- 8) Upper extremity problems in MPS include all of the following *except*:
  - a) Restricted joint motion.
  - b) Madelung's type deformity of the wrist.
  - c) Carpal tunnel syndrome.
  - d) Cubitus varus.
  - e) Trigger digits.

**Answers**

1. b
2. a
3. b
4. b
5. b) False
6. c
7. b
8. d