

CME Section

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Every question or request for information on the exam answer sheet, the evaluation, and the certification pages must be completed to be eligible for CME credit. Leaving any item unanswered will make void the participant's response, and no credit will be awarded.

Participants may read the articles, take the exam by issue (1 credit/issue), or wait to study several issues together. Documentation can be received at the *Journal* office at any time throughout the year, and accurate records will be maintained for each participant. CME certificates are issued only once per year, in January, for the total number of credits earned during the prior year.



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If you have any questions, please email the Editor (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 Radiologic and Neuroradiologic Findings in the Mucopolysaccharidoses

CME Article number 2: *Ralph Lachman, Elisa Leão Teles, Sérgio Castro, Margarida Ayres Basto, Alexandra Adams and Kenneth Martin*

Questions

- 1) All MPS diseases can demonstrate severe skeletal abnormalities and joint disease except:
 - a) MPS I (Hurler)
 - b) MPS II (Hunter)
 - c) MPS III (Sanfilippo)
 - d) MPS IV (Morquio)
 - e) MPS VI (Maroteaux Lamy)
- 2) Definitive Diagnosis of MPS disease is made by:
 - a) Genetic skeletal x-rays
 - b) MRI of the brain and spine
 - c) Quantitative urine glycosaminoglycan measurement (GAG)
 - d) Characterization of urine GAG species by gel chromatography
 - e) Quantitative measurement of specific lysosomal enzyme in blood, leukocytes or skin biopsy fibroblasts
 - f) Mutation analysis
- 3) The skeletal finding of dysostosis multiplex should be used to diagnose specific MPS subtypes
 - a) True
 - b) False
- 4) Dyostosis multiplex includes the following radiologic characteristics:
 - a) J shaped sella
 - b) Paddle shaped ribs
 - c) Superiorly notched vertebrae
 - d) Short thick proximally pointed metacarpals
 - e) All of the above
 - f) None of the above
- 5) Spinal cord compression is an important finding in MPS and can lead to:
 - a) Growth failure
 - b) Mental retardation
 - c) Seizures
 - d) Paralysis
- 6) Spinal cord compression is best seen on:
 - a) Spine x rays
 - b) CT on the spine
 - c) MRI of the spine
 - d) None of the above
 - e) All of the above
- 7) Dynamic Flexion Extension Films are used to:
 - a) Identify abnormal vertebral shapes characteristic of dysostosis multiplex
 - b) Determine whether odontoid dysplasia or hypoplasia is present
 - c) Evaluate instability of C1, C2

- 8) Dynamic Flexion Extension Films are most often abnormal in:
- a) MPS I
 - b) MPS II
 - c) MPS III
 - d) MPS IV
 - e) MPS VI
- 9) MRI findings on brain should be used to distinguish MPS I, II, and III
- a) True
 - b) False

Answers

1. C
2. E
3. B
4. E
5. D
6. C
7. C
8. D
9. B