

CME POSTTEST

Update On CCR5 Inhibitors: Scientific Rationale, Clinical Evidence, and Anticipated Uses

AUTHOR

Athe Tsibris, MD
Partners AIDS Research Center
Instructor in Medicine
Harvard Medical School

COURSE DIRECTOR

James F Braun, DO
Editor-in-Chief, *The PRN Notebook*
Physicians' Research Network, Inc.
New York, New York

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1. Read the article carefully, and
2. Print this CME Posttest document and complete the following sections: (Please print clearly.)
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 - II. Posttest Evaluation Survey,
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4. This posttest and the evaluation survey must be received by December 31, 2008 for you to be eligible to receive CME credit from the New York County Medical Society (NYCMS).

Section I: CME Q&A Please circle only ONE answer for each of ten questions below.

1. The primary determinant of HIV coreceptor use (ie, using either CCR5 or CXCR4) is:
 - a. gp41
 - b. The V1 and V2 loops of gp120
 - c. The V3 loop of gp120
 - d. The bridging sheet (C4 region) of gp120
2. During natural HIV infection, viruses using which coreceptor are almost exclusively transmitted?
 - a. CCR5
 - b. CXCR4
 - c. Both CCR5 and CXCR4
3. Current published data best supports the use of CCR5 antagonists in which patient populations:
 - a. Treatment-naïve patients
 - b. Antiretroviral-experienced patients as a second line regimen
 - c. Antiretroviral-experienced patients as a salvage or deep salvage regimen
 - d. b and c
 - e. All of the above
4. Patients failing CCR5 antagonist therapy do so in the majority of cases because of:
 - a. A change in viral coreceptor usage (CCR5 to CXCR4)
 - b. The development of viral mutations that confer resistance (classic genotypic resistance)
 - c. Non-compliance
5. When genotypic resistance to CCR5 antagonists does emerge:
 - a. Mutations in the V3 loop of HIV-1 gp120 are found
 - b. V3 loop mutations can be seen at different amino acid positions in different viruses
 - c. Mutants acquire the ability to use the inhibitor-bound form of CCR5 for viral entry to the host cell
 - d. a and b
 - e. All of the above
6. Determining viral coreceptor usage using the Trofile™ assay (Monogram):
 - a. Usually requires a patient viral load >1,000 copies/mL
 - b. Will misclassify patients as having R5 virus only approximately 10% of the time
 - c. Has decreased sensitivity for detecting CXCR4-using viruses if they comprise <10% of the viral quasispecies
 - d. Represents a significant improvement over previously available methods to determine coreceptor usage
 - e. All of the above
7. Patients with inherited decreased levels of natural CCR5 (CCR5Δ32 heterozygotes):
 - a. Experience slower rates of HIV disease progression
 - b. Have increased morbidity and mortality from West Nile Virus infection
 - c. Are more likely from Northern Europe than Southern Europe or Africa
 - d. a and c
 - e. All of the above
8. A decrease in maraviroc dose to 150 mg PO BID is required when the drug is combined with either efavirenz or ritonavir-boosted protease inhibitors:
 - a. True
 - b. False
9. When ordering an entry susceptibility assay, decreased susceptibility to CCR5 antagonists is manifest by:
 - a. A classic rightward displacement of the IC₅₀ curve, with a resultant increase in IC₅₀
 - b. A flattened curve showing a decreased plateau but an essentially unchanged IC₅₀
10. When patients on CCR5 antagonists have a change in coreceptor usage from CCR5 virus only to dual/mixed (D/M) or CXCR4 virus only, this means:
 - a. A CCR5-using virus has mutated and become a dominant CXCR4-using virus
 - b. A minority CXCR4-using viral population, below the limit of detection of the Trofile assay, has expanded, crossed the limit of detection and can now be identified by Trofile
 - c. CXCR4-using virus has killed off CCR5-using virus

