

## Answers

### Overview of antiretroviral therapy in 2019

Expiration Date: 28 April 2020

CME point # / CNE point: 1 / PEM point: 0

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- Which of the following best defines 'highly active antiretroviral therapy' (HAART)?
  - HAART is the use of two or more antiretrovirals in combination
  - HAART refers to antiretroviral therapy that results in durable suppression of viral load to undetectable levels ✓**
  - Antiretroviral therapy is HAART if results in sustained rise in the CD4 count
  - Antiretroviral therapy is HAART only if it comprises a double nucleoside backbone in addition to a protease inhibitor, an integrase inhibitor or a non-nucleoside reverse transcriptase inhibitor
  - None of the above
- In which of the following situations should HAART be withheld?
  - An asymptomatic patient with CD4 580/uL
  - A patient with recent history of zoster involving T4 and T5 dermatomes but a current CD4 count of 650/uL
  - A patient with acute HIV infection
  - A patient with newly diagnosed cryptococcal meningitis and a CD4 count of 10/uL ✓**
  - A patient with cervical TB lymphadenitis and a CD4 count of 45/uL
- Which of the following is an appropriate strategy of using HAART?
  - HAART should not be initiated in a person who habitually uses heroin until he is put on methadone maintenance
  - An alternating strategy of two HAART regimens with different resistance profiles enhances the prospect of long term viral suppression
  - When diagnosed, TB meningitis necessitates immediate use of HAART
  - HAART is indicated for treatment of progressive multifocal leukoencephalopathy ✓**
  - All of the above

4. Which of the following is not a known benefit of antiretrovirals?
- (a) **prevention of onward HIV transmission by shared needle use** ✓
  - (b) prevention of mother-to-child transmission of HIV
  - (c) reduction of morbidity and mortality
  - (d) prevention of HIV acquisition by HIV-uninfected individuals
  - (e) immune reconstitution after initiation of antiretroviral treatment
5. Which of the following associations is NOT appropriate?
- (a) transmitted drug resistance and nevirapine
  - (b) low genetic barrier and raltegravir
  - (c) dizziness and efavirenz
  - (d) mitochondrial toxicity and stavudine
  - (e) **All are appropriate associations** ✓
6. Which of the following treatment strategies will likely prevent emergence of primary antiretroviral resistance in the community?
- (a) **maintaining treatment adherence at >95%** ✓
  - (b) rapid initiation of nevirapine-based HAART on the day of confirmed HIV diagnosis
  - (c) Alternating regimen of NNRTI- and PI-based HAART
  - (d) a + b
  - (e) a + c
7. Which of the following statements regarding the monitoring tools of antiretroviral treatment is false?
- (a) baseline resistance assay should be performed for all patients
  - (b) screening for dual and X4 tropic viruses is necessary before use of maraviroc
  - (c) therapeutic drug monitoring should be considered when complex drug drug interactions are anticipated
  - (d) **CD4 count has to be measured at least 6-monthly for all patients** ✓
  - (e) none of the above
8. Which of the following treatment considerations is appropriate?
- (a) Your patient is on Truvada + efavirenz, currently tolerating his treatment well and with undetectable viral load. However, a test report shows that he has a CYP2B6 polymorphism which predisposes to CNS adverse effects of efavirenz. You recommend decreasing the dose of efavirenz to 400 mg daily.
  - (b) Your patient is on Genvoya, currently tolerating his treatment well and with undetectable viral load. However, he has lately been missing his appointments. Although he denies it, you suspect he is not fully adhering to his treatment. You therefore withhold treatment for the time being
  - (c) Your patient is on Truvada + dolutegravir, currently tolerating her treatment well and with undetectable viral load. Having discussed with her husband, she expresses to you her desire to conceive. You recommend changing to Combivir + dolutegravir because of the well known effectiveness of zidovudine in preventing mother to child transmission.
  - (d) Your patient was put on Kivexa + efavirenz two weeks ago. She returns today with fever and severe rash. You decide to stop all antiretroviral treatment immediately and plan on restarting with Triumeq when the symptoms subside.
  - (e) **None of the above** ✓
9. Which of the following regarding using only one or two drugs for HIV treatment is true?
- (a) **A few two-drug regimens have shown success as maintenance therapy for those who have achieved prolonged viral suppression with conventional treatment** ✓
  - (b) For treatment naïve patients with viral load <100,000/uL, dolutegravir monotherapy is as effective as conventional three-drug regimens

- (c) All successful two-drug regimens have dolutegravir as the common component
  - (d) No two-drug regimen has shown success as initial treatment in randomised clinical trials
  - (e) none of the above
10. Which of the following is reasonable expectation of antiretroviral therapy in the future?
- (a) Long acting formulation of treatment that does not require daily dosing will become available
  - (b) Two-drug regimens may become acceptable as initial treatment
  - (c) Wide treatment coverage of patients will decrease the incidence of new infections.
  - (d) New class of antiretrovirals will emerge
  - (e) **All of the above** ✓