第16回日本エイズ学会

Interactive Session

症例から学ぶ HIV感染症診療のコツ

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Case 1

- 45 yo White Male
- Diagnosed on routine insurance examination
- PMHx remarkable for HTN, diet controlled
- No medications
- Understands treatment issues and wants to begin therapy if you think it is appropriate
If his viral load is 30,000 c/ml, which CD4 count would you recommend starting therapy?

- 750 cells / ul
- 500 cells / ul
- 350 cells / ul
- 300 cells / ul
- 250 cells / ul
- < 200 cells / ul
- Would observe
If his initial CD4 count is 700 cells/ul, which viral load value would you recommend starting Rx?

- 1,000 c / ml
- 5,000 c / ml
- 10,000 c / ml
- 30,000 c / ml
- 100,000 c / ml
- 300,000 c / ml
- 1,000,000 c / ml
- Would observe (e.g., Every 2 months)
His CD4 count is 284 cells/ul and his VL 72,000 c/ml. You recommend starting with:

- 2 NRTIs and a PI
- 2 NRTIs and a ‘boosted’ PI
- 2 NRTIs and an NNRTI
- 3 NRTIs
- NRTI + NNRTI + PI
- 2 NRTIs and NtRTI (Tenofovir)
- No therapy now (A Holiday)
His CD4 count is 34 cells/μl and his VL 284,000 c/ml. You recommend starting with:

- 2 NRTIs and a PI
- 2 NRTIs and a ‘boosted’ PI
- 2 NRTIs and an NNRTI
- 3 NRTIs
- NRTI + NNRTI + PI
- 3 NRTIs and NtRTI (Tenofovir)
Likelihood of Developing AIDS in 3 Years

4 Year Survival in HAART Era

Chen, et al, 8th CROI, 2001
Durability of 1\textsuperscript{st} Regimen

Chen, et al, ICAAC, 2001
What is virologic failure?

- Viral load > 50 copies / ml (confirmed)
- Viral load > 400 copies /ml (confirmed)
- Viral load < 1 log below baseline
- Viral load < 0.5 log below baseline
- Other
What is Failure?
A 42 yo man is referred to you for management of his antiretroviral therapy. He was originally diagnosed 5 years ago and has been on several antiretroviral regimens, including:

- **11/97** D4T / ddI / NVP
- **10 / 99** ZDV / 3TC / NFV
Case 2

- His viral load /CD4 results are as follows:
  - 11/97 230,000 / 45 (ddI / D4T / NVP)
  - 2/99 < 400 / 234
  - 10/99 8480 / 265 (ZDV / 3TC / NFV)
  - 5/00 <400 / 254
  - 9/00 44,500 */ 220 (* confirmed)
Case 2

A genotypic resistance panel reveals the following mutations:

- RT: M41L, T215Y, K219Q, Y181C
- Protease: D30N, I84V, L90M
Case 2

Which of the following drugs should be used in the next regimen:

- ZDV
- D4T
- Abacavir
- Efavirenz
- Indinavir
- Tenofovir
Case 2

His viral load /CD4 results are as follows:

- 9/00  44,500 */ 220  (* confirmed)
- 10/00 ABC/D4T/IDV/rit
- 1/01  <400 / 350
- 4/01  32,600/ 300
- 7/01  83,000/ 290
- 10/01 134,000 / 230
- 9/02  178,000 / 170
Case 2

His local physician ordered a genotypic resistance panel. It revealed the following mutations:

**RT:** M41L, T215Y, M184V, K219Q, Y181C

**Protease:** L10F, D30N, G48V, I82V, L84M, L90M
Which of the following drugs should be used in the next regimen:

- ZDV
- D4T
- ddI
- ABC
- Efavirenz
- Indinavir
- SQV
- LPV
- APV
- TNV
A phenotype reveals:

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Which of the following drugs should be used in the next regimen:

- ZDV
- D4T
-ddl
- ABC
- Efavirenz
- Indinavir
- SQV
- LPV
- APV
- TNV
As a management strategy, is it a good idea to use a drug holiday in this setting to ‘reset’ the virus back to wild-type for better outcome?

- Yes
- No
Change in Drug Susceptibility Over Time (n=6)
Change in HIV RNA and CD4 (STI) Before and After Switch in Phenotypic Susceptibility (n=16)

Change HIV RNA

Change CD4

Weeks Before and After WT Switch

13 subjects excluded from HIV RNA analysis because baseline levels near upper limit of quantification.
32 Year Old White Female

- Diagnosed HIV+ December 1995
- Initial CD4 520; HIV RNA 10,900
- March 1996 started on stavudine / lamivudine and indinavir
- Tolerated well except 1 episode nephrolithiasis in 1999
- HIV RNA < 50 for 4 years;
  Current CD4 840
She has heard about the long-term complications of HAART therapy, is very concerned and wants your advice. You recommend:

- “Stay the course, change would not be prudent” (George Herbert “W” Bush)
- Substitute a NNRTI for Indinavir
- Substitute zidovudine for stavudine
- Substitute both a NNRTI and zidovudine for indinavir and stavudine
- Stop her current therapy and observe
- Tell her “Predictions are always difficult …especially when they involve the future” (J. Danforth Quayle)
A 22 yo HIV-infected woman delivered a healthy baby (HIV-negative) 2 months ago. Diagnosed HIV+ during a routine prenatal workup. CD4 count at that time was 540 cells/μl; VL 12,000. She was started on ZDV / 3TC / Nevirapine. At the time of delivery, her VL <50 and CD4 count 870 cells/μl. She is not breast feeding.
She does not have a strong opinion about her ART. At this time you recommend:

- Continue treatment
- Stop therapy
- Phone a friend
42 year old Male

- Diagnosed 11/99
- CD4 count 43 cells/ul; VL = 233,000
- Started on ZDV/3TC/SQV/rit
- VL < 50 copies for last year
- CD4 = 87 cells/ul
He returns and asks why his CD4 count is not higher and whether there is anything you can do. You recommend:

- No change in therapy
- A Drug Holiday
- Substitute Efavirenz for SQV/rit
- Intensify Rx with (add) Tenofovir
- Substitute Efavirenz for ZDV/3TC
- rIL-2 (3 million units qD X 5 days every 2 months)
For HIV /HCV co-infected patients, which of the following is true:

- Alcohol consumption of < 1-2 drinks a day (40 mg ETOH) is generally not harmful
- Response rates of genotype 1 and genotype 2/3 infection to IFN Rx are ~ same
- Hepatitis A and B vaccinations induce a hyperactive immune response and speed progression of fibrosis
- Rates of drug-related liver disease are ~ same as non-HCV patients
- All of the above are true
- None of the above are true
Next Case...

- 52 year old Black male
- First diagnosed April 1998
- Initial VL 36,000 c/ml
- Initial CD4 253 cells/ul
- Wanted to start Rx
– Started on: D4T 40 mg bid; 3TC 150 mg bid; Indinavir 800 mg tid
– Week 16, VL < 50 c/mL; CD4 448 cells/ul
– Week 60, complains of mild burning pain in lower extremities and increased abdominal girth.
– He also had intermittent nausea, fatigue, some SOB with exertion (denies chest pain)
Lab Results
(week 60; Fasting)

- VL < 50 c/ml
- CD4 420 cells/ul
- WBC 5,600 normal differential
- PCV 41%

- Na 142
- Cl 100
- Cr 0.9
- Glu 172
- ALT 30
- Chol 218
- TB 2.2 (1.7 indirect)

- K 4.1
- HCO3 20
- BUN 21
- AST 36
- Alk phos 134
- TAG 487
You recommend:

- Continue Current Therapy; Reevaluate in 2 weeks
- Substitute Tenofovir for D4T
- Reduce D4T dose to 30 mg bid
- Substitute EFV for IDV
- Change entire regimen to EFV, ABC, 3TC
- Stop antiretroviral therapy
Next Case...

- 37 yo Male smoker, diagnosed with HIV 18 months ago
- CD4 103 cells/ul; VL 104,000 c/ml
- Started on D4T / 3TC / LPV / r
- Current CD4 325 cells/ul; VL <50 c/ml
- TG = 1047 mg/dl; Chol 237 mg/dl (HDL 35)
At this point you recommend:

- Observe for another 3 months with diet and exercise alone
- Start a ‘statin’ agent
- Start a fibrate
- Substitute NVP for LPV/r
- Substitute ABC for D4T
- Some other option
Next Case, with a twist…

- 37 yo Male smoker, diagnosed with HIV 18 months ago
- CD4 103 cells/ul; VL 104,000 c/ml
- Started on D4T / 3TC / EFV
- Current CD4 325 cells/ul; VL <50 c/ml
- TG = 420 mg/dl; Chol 237 mg/dl (HDL 35)
At this point you recommend:

- Observe for another 3 months with diet and exercise alone
- Start a ‘statin’ agent
- Start a fibrate
- Substitute NVP for EFV
- Substitute ABC for D4T
- Some other option
Next Case, shaken not stirred...

- 37 yo Male smoker, diagnosed with HIV 18 months ago
- CD4 103 cells/ul; VL 104,000 c/ml
- Started on D4T / 3TC / EFV
- Current CD4 325 cells/ul; VL <50 c/ml
- TG = 425 mg/dl; Chol 187 mg/dl (HDL 35)
- Complains of facial fat loss
At this point you recommend:

- Observe for another 3 months, encourage him to eat more and exercise
- Start growth hormone therapy
- Substitute NVP for EFV
- Substitute ABC for D4T
- Refer to a plastic surgeon for implants
- Some other option
## Efavirenz Switch Studies: 2NRTI + PI → 2NRTI + Efavirenz

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### Nevirapine Switch Studies: 2NRTI + PI → 2NRTI + Nevirapine

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# Nucleoside Switch Studies: D4T → ZDV or ABC

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## Treatment Interruption Studies

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