INFECTIOUS DISEASES

DRUGS RAID- ANTIRETROVIRALS

POST EXPOSURE PROPHYLAXIS

Truvada (tenofovir disoproxil and emtricitabine)

- **Dosing:** One tablet per day
- **Action:** Inhibits nucleoside reverse transcriptase
- **Side effects:** Nephrogenic diabetes insipidus; proximal renal tubulopathy; renal failure; abnormal dreams; hyperpigmentation; pruritus

Raltegravir

- **Dosing:** One tablet 12 hourly
- **Action:** Inhibits HIV integrase
- **Side effects:** Abnormal dreams; asthenia; depression; hyperactivity; hypertriglyceridaemia;

General advice about anti retrovirals:

Interactions: Alginates should be should not be taken 4 hours before or after taking PEP medications

Pregnancy: Although antiretrovirals are commonly taken in pregnancy, patients should be advised to avoid becoming pregnant while taking PEP as they are potentially teratogenic

Side Effects: Abdominal pain; anaemia; anorexia; arthralgia; blood disorders; cough; diarrhoea; dizziness; dyspnoea; fatigue; gastro-intestinal disturbances; headache; insomnia; liver damage; metabolic effects; myalgia; nausea; neutropenia; osteonecrosis; pancreatitis; rash; thrombocytopenia; u1rticaria; vomiting

For a complete list of side effects see BNF

Complete the patient follow- up form and give it to them to take to the Sandyford Central clinic.

ANTIRETROVIRAL CLASSES

There are 5 classes of drugs, used in combination, to treat HIV infection. Use of these medications in combination is known as Highly Active Anti- Retroviral Therapy (HAART). The drugs are classifies by the phase of the retrovirus life- cycle that they inhibit.

Entry inhibitors (AKA Fusion inhibitors)

Interfere with binding, fusion and entry of HIV- 1 to the host cell.

Nucleoside Reverse Transcriptase Inhibitors (NRTI)
Nucleotide Reverse Transcriptase Inhibitors (NtRTI)

As an RNA virus and as such is unable to incorporate itself into human DNA. It must reverse transcribe itself into DNA which is then integrated to human DNA. Since human cells don't convert RNA into DNA the virus must use one of its own enzymes to do this, making this a target for selective inhibition. NRTIs act as chain terminators by competitive inhibition, once they have been incorporate into a nucleic acid strand they block other nucleosides/ nucleotides from attaching to them. They are however non- discriminating and also block host DNA synthesis, so causing side effects.

Non- Nucleoside Reverse Transcriptase Inhibitors (NNRTI)

They bind to Reverse Transcriptase at a site other than the active site, changing RT shape and so blocking its function i.e. non- competitive inhibition.

Integrase Inhibitors (AKA Integrase Nuclear Strand Transfer Inhibitors (INSTIs))

Inhibits the viral enzyme Integrase which integrates viral DNA into host DNA

Protease Inhibitors

Block the enzyme Protease which is necessary for mature virion production. Viral particles produced in the presence of Protease Inhibitors are defective and mostly non- infective.