**Introduction:**
The antiretroviral therapy (ART) using as postexposure prophylaxis (PEP) should be started as soon as possible after the exposures. However, the main obstacle to achieve the best efficacy of the 4 week course of triple drug PEP regimens was drug related adverse effects resulting incomplete the course. The current guideline recommends the newer generation of ART which has less toxicity and better tolerability for improving the regimen adherence.

**Objective:**
There was no data of rilpivirine used in non-HIV patients in term of tolerability. The objective of this study is to evaluate the adherence and tolerability of Tenofovir (TDF)-Lamivudine (3TC)-Rilpivirine (RPV) as the occupational PEP.

**Methods:**
We conducted a multicenter observational prospective study. Healthcare workers (HCWs) who had risk of occupational HIV exposure were eligible. Baseline demographic data, description of HIV exposure events and HIV serological status of the source patients were collected. We assessed adherence and adverse effects of TDF-3TC-RPV at day 3, week 1, 2, 3, 4 and 12. The Common Terminology Criteria for Adverse Events (CTCAE) version 4.03 was used for adverse events reporting and grading.

**Inclusion criteria**
- Age over than 18 years.
- Informed consent before enrolling in a study

**Exclusion criteria**
- Known case of HIV with suspected drug resistant source
- HCWs who is pregnant or give a breast feeding
- HCWs who has GFR < 50 mL/min
- HCWs who has HIV infection

**Results:**
Between May 2015 to March 2016, 41 HCWs were enrolled and 31 (75.6%) were female. The mean age was 28.6 years (range 22-60). Nurses and nurse assistants (39%) were the most frequently exposed group (figure 1) and percutaneous injury (68.3%) was the common type of exposure (figure 2). Among 41 exposures, the HIV serological status was determined in 17 exposures (41.4%). 11 (26.8%) were exposed to HIV infected source. All of HCWs were received ART for PEP within 72 hours. Thirty-three HCWs (80.5%) were completed the 4 week course of PEP (figure 3). Three (7.3%) HCWs discontinued PEP due to adverse effects (nausea and vomiting). Four (9.8%) forgot to take medicine at least one day of 4 weeks and one (2.4%) decided to withdraw because of the source patient was unknown HIV serological status. The most common adverse effects reported included nausea or vomiting (43.9%), dizziness (29.2%) and fatigue (14.6%) (figure 4). Most adverse events were mild and self-limited. No seroconversion at 12th week was found in this study.

**Conclusion:**
Using TDF-3TC-RPV as occupational PEP was very well tolerated without serious adverse effects. Only Three (7.3%) HCWs discontinued PEP due to moderate degree of nausea and vomiting.

**Limitation**
- Adherence was reported from interview.
- Rilpivirine can not be used in
  - setting of high prevalence of HIV primary drug resistance.
  - ART-experienced source who had evidence of drug resistance.

**Keyword:**
HIV INFECTION and PREVENTION