Clinical Education Initiative
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# INTERACTIONS BETWEEN ARVS AND RECREATIONAL DRUGS

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12/6/2017

**Diagnosing Acute HIV Infection in Your Clinical Setting**
**[video transcript]**

[00:00:07] OK. Now I'm going to try to fit a lot into a fairly short period of time.

[00:00:14] Things have gotten a lot better than they were a long time ago in terms of interactions. First of all, none of the people that make the heroin or the illicit fentanyl or any of those other things give me any money that I'll be talking about. Neither do the makers of Buprenorphine or Naloxone. So, I'm going to talk briefly about the intra-the mechanisms behind the interactions, that that we're not going to see a whole lot of, list the common interactions that we've got and talk a little bit about strategies to minimize these problems. Really the upshot is that right now with the current regimes there's not a lot of interactions to be worried about. And I think that's some information that's really helpful. So back in residency, our pharmacologist said "Any drug can do anything to anyone at any time". Might be a bit of an exaggeration but especially we need to think about when our patients are buying drugs on the street with no label. But that being said nice, I forget paper stole this from, but currently preferred HIV regimes are unlikely to be either perpetrators or victims of drug-drug interactions with recreational drugs. Love that perpetrators and victims. So, there's a few ways that interactions tend to that are in the major ways that interactions happen. First of all, we can have interactions affecting drug absorption for example antacids and PPI's. We can have the cheap one we really worry about or the pad of metabolism with the cytochrome P450 enzyme system and, to a lesser extent, with the UGT system. And then, we'll all need to be thinking,

[00:01:44] I know we're not using a lot of Ritonavir these days, but the boosters are a little bit important. And then there's of course a potpourri of other ways we can have interactions. But the first two are really the major ones out there. So, I don't want to forget about alcohol which people tend to drink orally for a variety of reasons like relaxation, appetite stimulation, social anxiety. Very little induction of other enzymes. So, we don't have any major interactions with HIV meds but as the case came up with we do want to make sure that people are aware that when you mix them with other sedatives you've really got to watch out. And I, you know, I'm going to say over and over again, we need to not say "Oh don't worried about alcohol" but we need to make sure that people not skip their meds in order to take all of these things, that it's almost certainly safer and we can talk about phrasing to take your meds if you're going to drink or take drugs. Opiates are the big one right now, so I hope I'm I'm talking to a lot of people that are prescribing or thinking of prescribing buprenorphine.

[00:02:49] So heroin is actually much more simple than many of the other opioids as you know it's sniffed, it's injected, it's smoked, it's oral. People mostly do it to get euphoria and then eventually to avoid withdrawal. Heroin's metabolism is pretty simple. Liver Hydroxylation. But when we start to look at the semi-synthetics and full synthetics, we do see some of the cytochrome 450 system coming into play.

[00:03:12] So the chief thing about that is you're just people may have an increased or a decreased effect of their own opioids they're taking; they'll figure that one out themselves.

[00:03:23] But, again, I don't know if anybody's using Ritonavir there anymore, but the Ritonavir may impact on some of the semi-synthetics. Lots of illicit fentanyl all over the streets, made in labs, lots of lots of analogs. We really don't know much about them.

[00:03:40] So I want you to be thinking a little bit about your opioid agonist treatment. We used to, I mean, methadone is a big one for P450. So, and we have seen a lot of interactions, particularly with tuberculosis medications, but really, I was the medical director of a methadone clinic, you just adjust the methadone dose. It's not a big deal. Just have to have the communication there and not be afraid to go up and dose or to split doses. Buprenorphine has some potential interactions, but really very very little has been recorded especially with the meds that are being used now. Again, if your patients feel sedated, go down on their dose, if they feel in withdrawal, go up in their dose. So, in that case you kind of listen to your patients when you're the prescriber.

[00:04:25] Cocaine is always popular. It's so people are sniffing it, smoking it, injecting it to feel good, to have sex, a whole lot of reasons. So, this is a pretty simple metabolism that's not really going to affect your medications much as a tiny bit of their metabolism that's involved. I want you to know that multiple antidepressants and anticonvulsant medicines have been given to help people stop using cocaine.

[00:04:54] It hasn't worked, but it hasn't been dangerous either. I don't imagine anybody's got patients on Antabuse but that can raise levels of cocaine. No known interactions with HIV meds and cocaine is something everybody wants to make a case report about something bad happens.

[00:05:10] Do be aware that it can lower people's levels of methadone and so people are continuing to use opiates while they're on their methadone, that's something to consider. Two answers to that. Quit the cocaine or get the clinic to raise the dose. You are seeing a lot of people using various kinds of amphetamines which has been popular along time as well. So it's a stimulant injected, smoked, oral, rectal use. This paper leapt out at me it's from Australia, but when in Australia looked at methamphetamine related deaths attributed to drug toxicity and 72 percent of these folks had concomitant opioid use. So I don't know what your patients might be doing with opioids to feel better after taking, you know, coming down from the amphetamines, but that might be a discussion because, you know, these are deaths. They might actually be good candidates for naloxone on hand and talking to

their friends. So, this is somewhat more complicated metabolism but the current regimes, unless you're using some Ritonavir.

[00:06:15] Oh I guess I thought that point was so important I threw it in twice. So, you know a few of the side effects here, you know, possibly some long-term neurotoxicity which is concerning. But there's not really a lot of serious interactions documented. We had case reports a while back of Ritonavir with both amphetamine and with ecstasy, which I deleted that slide given the time. But, again, people should take their meds even if they're using. It also does increase the pain relief of morphine which has sort of an interesting fun fact there. Lots of marijuana being out there of course. Smoking it, oral, lots of ways of taking it.

[00:06:58] Now, for a whole variety of reasons, some of your patients might actually still be doing for appetite stimulation or nausea. There's some potential for some interference for the way, you know, for the CYP450 system that may interfere a little bit with the THC metabolism. Again, people will adjust their dose when they're taking the psychoactive drug. I think it's important to know that cannabinoids may be synergistic with opioids allowing reductions in opioid dosing, that's a whole other topic. But medical marijuana may in some places people are using it to help people reduce their opioid use. Remember it does potentiate any CNS detected depressants. Tachycardia is common right around the time of using the marijuana, hypertension as well, so those might be some risk for your patients mixing with other drugs.

[00:07:54] Synthetic cannabinoids seem to come and go. I'm not sure they go away, but I think we get more dangerous ones that lead to a whole bunch of E.R. calls, and then we get less dangerous ones and everybody's just smoking in the park right around the corner from me. So basically, these are all of plants sprayed with all kinds of synthetic cannabinoids. No idea what you're getting even in the same bag that you buy at the bodega. Most of the poison control calls are about anxiety, tachycardia, psychosis. They do have some cytochrome before 450 system work but we really don't know much about how they might interact. So, we go back to, you know, any drug can do lots of things. I think people are better off smoking marijuana. I sometimes wish people would just simply stop testing for marijuana because that's one of the reasons people use the K2. We

[00:08:40] do have a lot of Benzo's on the street and prescribed. Certainly, people use them in the crash phase after stimulant use. They are metabolized by the CYP3A4 system; part but Lorazepam, Oxazepam, and Temazepam are a little bit less so. So, what does all this mean?

[00:09:04] Well, people with addiction or substance use disorders, that's a major competing priority. They've got a double stigma going on. The key thing I'm going to focus on, they're afraid of drug

interactions as well. You know there's not really always a great relationship between the medical profession and people that are using street drugs. There's a lot of mistrust. We're going to see a lot of homelessness and psychiatric disorders. So, adherents see that there's some barriers to overcome and I'm going to focus on two items. One is if you've got patients that are dependent on opioids and have opioid use disorder get them onto opioid maintenance whether it's buprenorphine or methadone. They're less likely to become HIV infected which probably means they're less likely to transmit. They're less likely to be hospitalized particularly if they're HIV positive. Definitely more access to HIV meds and 80 up to 80 percent less likely to die of an overdose than out of treatment opioid users. So, these are really key medicines. Do it harm reduction style. Just make sure they take them every day. They want counseling, that's great. They want all the other stuff but if they'll take them part of the time, every day, that's great. The second thing is something that I've been talking about for years anecdotally about my patients. But finally, we've got some literature that address the issue of intentional non-adherence related to drug and alcohol use. So, here's a couple of studies from pretty much the same group. Here

[00:10:27] they looked at a whole bunch of patients, I believe in Atlanta, five hundred thirty patients on antiretroviral therapy who screen positive for one of twelve drugs. 35 percent of these reported intentionally skipping meds when using drugs or alcohol. And these 35 percent was associated with poorer treatment outcomes and less viral load suppression.

[00:10:49] Another Look at sort of much more qualitative study, 57 people that carried around their Palm Pilot for 45 days actually I bet that was the other side, that text messaging passed Palm Pilot days.

[00:11:03] And the people that believed that there was a lot of toxicity with their alcohol missed more doses not only on drinking days but on non-drinking days. So, you know what are you going to say? It's OK to use drugs.

[00:11:16] Well, you know, you're not willing to say that. Say something to the effect of "I wish you wouldn't be using drugs from the street. There are lots of dangers we can talk about. But if you are, it's probably safer to continue your meds whether it be prep or your HIV regime than to skip it in order to take those drugs". You can't always be sure you really have no idea what's in those bags and joints that they're buying. But basically, we're really not seeing a lot of interaction. It's so much easier than it used to be. Definitely don't forget that opioid use disorders benefit from opioid agonist treatment. We're not talking about Naltrexone today but it doesn't have this kind of data behind it. And people may have better adherence if they're aware that skipping that it's safer to take their meds than to skip them. I don't know if the counseling will work. Seemed to work with a lot of my patients before we had the studies. But I think it's a key point to address with folks. Yeah and I'm thinking about one patient who is like "Well, I don't take my meds when I go on cocaine run" it's like well you should. And she's like "Oh, OK. Well then, I maybe should keep them at my mother's house because that's the neighborhood I go

on my cocaine runs in". And people can think of strategies they still might forget. But at least they're not going to do it intentionally. Maybe.

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