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Sticking Points: Managing Injection Site Reactions From Long-Acting Injectable Medications for HIV Care

Announcer:

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Dr. Price:

Welcome to this educational activity from GLC.

Long-acting injectables represent one of the more significant shifts in HIV treatment and prevention in recent years. On the treatment side, we've got patients who are now undetectable on 6 visits a year instead of 365 pills. On the prevention side, we've got 2 options: cabotegravir, or CAB, every 2 months, and lenacapavir, or LEN, twice a year. And for a lot of our patients, this has really been life-changing. Been very excited about these medicines. But for some of our patients, they really are hesitant to start, or some are getting on the shots and asking to stop because of injection site reactions. And a lot of it's mostly related to pain at the site or nodules that were forming. And that really does line up with what we saw in the trials, where site reactions were the most common adverse events across the board. So today, we're getting practical about it, what actually makes the shot hurt less and what we need to tell patients before they leave.

I'm Dr. Dakota Price. I take care of patients living with HIV throughout central Alabama. And joining me today is Dr. Emma Atkinson. Emma is an HIV clinical pharmacist who runs injections in our multidisciplinary HIV and PrEP clinic. So I prescribe these medicines, but Emma is the one actually giving them and instructing people on them.

And she spent over the last year troubleshooting how we do it in our clinic to keep reactions to a minimum. And we just want to share some of the tips that we've developed over the years. I'm going to hand her a couple cases you're likely to see if you're giving these medications and have her walk us through what she'd do.

Emma, I'm glad you're here today.

Dr. Atkinson:

Thank you for having me.

Dr. Price:

So let's take a patient to start with. We have a 41-year-old male living with HIV. They're on cabotegravir and rilpivirine, or CAB/RPV,

every 2 months, and their viral load is suppressed, and overall they're doing well. He comes in today for his third round of shots and tells the nurse the last one hurt worse than the first 2.

He was sore most of the week, and he's really wondering if he should just go back to the pills. So, Emma, first thing, is that normal? And what should we actually tell him in that moment?

Dr. Atkinson:

Yes, the soreness is normal, and it's by far the most common thing that people report. In the big trials that went into approving this medication, the majority of people reported some pain at the site, but almost all of it was mild, grade 1, and the swelling and nodules were much less common. For most people, pain settled in about 3 days, and the large majority were fine in about a week.

But in those trials, most people had some pain with the first injection. By a year out, that was very uncommon, and then by 2 years it was almost nothing. So basically, if this patient can get through the front end of the pain, this usually fades over time. One thing that's worth clearing up because it does confuse some people, for treatment, the patient will be getting 2 shots at this visit, cabotegravir and rilpivirine, both intramuscular injections on opposite sides.

Dr. Price:

I think that's a great point, Emma. Let me jump in here because I think this one does trip up people. So CAB on its own is prevention, and we add RPV, and you got a full treatment regimen for HIV then. So when we're talking these through with the patient, it helps to be clear how many shots they're actually getting so they're not surprised at the time of the visit.

So back to our guy. He's here for his shot, but he's not sure if he wants to keep going. So, Emma, walk us through your whole routine before, during, and after the shot.

Dr. Atkinson:

So the first thing is to let the medication come to room temperature. It helps a lot if you have a protocol in place so that there's a designated person that is going to be pulling the medication out of the fridge early. As a reminder, we're drawing the medication up into 2 separate syringes to prepare the injection. The preferred site for the injection is ventrogluteal, which is in the hip, not our classic upper outer quadrant, and it's also what the labeling recommends for this medication because it's anatomically safer. There's fewer major nerves or vessels in the way, and there's less fat sitting over the muscle, so you're more likely to actually land in the muscle itself.

The upper outer quadrant is closer to the sciatic nerve and usually has more fat over it, which is why that location is falling out of favor. It's also worth reviewing the anatomical landmarks before you go in with the injection, especially if you're not used to giving it this way. One more thing to sort out before you go into the room is the needle length. If the patient has a BMI that's 30 or higher, you're likely going to need a longer needle than what comes in the kit with the medication. It's not a comfort thing. If it's too short and the drug lands in the fat instead of muscle, this ends up showing up in our blood levels.

In those trials that I referred to earlier, the patients that had a BMI of 30 and above ended up having a higher risk of virological failure. So basically, needle length is a dosing issue, not a comfort issue. It's important to get the patient and the muscle as relaxed as possible before the needle goes in. So you can either have them lie down, or we also have patients that prefer to stand, so I have them hold their hands on the end of the bed and shift their weight to either side just so that muscle ends up staying loose. I also like to distract patients by talking to them. I have full conversations while we're going through this procedure. Also, having them look somewhere else or giving them some material to read just to have them as distracted as possible. We also, in our practice, like to use a cold spray on the injection site and just spraying that for a couple seconds to numb the area, but also because it's shocking and distracting. And then the last thing would be, as you're giving the injection, make sure to push the plunger in slowly. This is probably one of the most important things that we can do to minimize pain.

Dr. Price:

Yeah, one of the points there I thought was really good as a reminder, Emma, about the needle size of BMI greater than 30. I think that's an easy one to forget. So thanks for reminding us of that.

For those just tuning in, I'm Dr. Dakota Price, and here with me today is Dr. Emma Atkinson. We're discussing best practice techniques for long-acting injectable HIV medicines to minimize site reactions

So let, let's flip it around. There's a lot of things people are doing out there. What do you think people are doing that they should stop doing that hasn't been shown to be that helpful?

Dr. Atkinson:

So you'll see that some places recommend using ice packs or heat packs before the injection, but there isn't good evidence behind it, so it just ends up adding time to your workflow, so we normally skip that. Some other clinics have tried using numbing creams, but there's not great evidence that they help there, and so it just ends up being an extra cost and resources that we don't necessarily need. What is important to remember is to make sure we're documenting correctly. We want to write down the sites, the sides that you injected on, and the needle length, because whoever is giving the next injection is going to be working off whatever you documented last time.

Dr. Price:

I think that was a really good walkthrough of what to do with the injection.

So let's shift gears a little bit and go to a different patient. We have a 27-year-old woman who started LEN for PrEP about 4 months ago. She calls the clinic because she's still got a firm nodule in her abdomen where the shot went in, and she wants to know if something's wrong. Emma, so LEN is a whole different animal, right? It's a different shot. It goes in a different location, and it has a whole set of different problems.

Dr. Atkinson:

Yes. Lenacapavir is completely different. It is a subcutaneous injection, so we're going into the fat rather than the muscle. It is 2 shots, but they're both given into usually the abdominal fat, at least 2 inches out from the navel, and this injection is done every 6 months rather than every 2 months. The thing that patients actually notice isn't pain associated with the injection, but it's a nodule, a firm lump in the fat from where the drug went in.

In the PURPOSE trials, most people getting lenacapavir felt this at one point, and it's usually about the size of a grape. But this nodule doesn't go away quickly. In the trial, nodules from that first set of shots that patients got lasted many months, sometimes closer to a year.

Dr. Price:

I think this nodule can be a bit alarming to patients. Emma, what can we tell them to reassure them and prevent them from having that call come into our clinic?

Dr. Atkinson:

Yes, it would definitely be alarming if they didn't know about it. So we want to tell them that that nodule is where the medicine is sitting and that it's supposed to be there. It's not a sign that something went wrong.

Dr. Price:

Does anything from what we talked about with the IM injections carry over and help with this injection?

Dr. Atkinson:

The subcutaneous injections are a little bit different. Unlike the CAB injection, using a cold pack 10 minutes before and after, or putting on numbing cream about a half an hour ahead can actually both be helpful. In our practice though, we just use the cold spray, which is much faster for clinic flow, and it still has the same effects. And we want to make sure that these are going into the fat, making sure to pinch up the tissue and inserting it at a 90-degree angle. If it is injected too shallowly, it can end up leading to necrosis and ulcers in the skin. And again, like with the IM injections, we want to make sure we're pushing the plunger in slowly.

Dr. Price:

Great. Thank you for those tips.

So, Emma, let's zoom out. So whichever shot that you're getting today, what does a patient really need to hear before they walk out the door related to aftercare?

Dr. Atkinson:

A couple of things. First, we want to remind them of what's normal. For the CAB and RPV, soreness for a few days, which is usually gone within a week, is normal. For the lenacapavir, we want to remind them of that lump that can be sitting there for a few months. If there is pain associated with either of those, using acetaminophen or ibuprofen is fine, though plenty of people won't need anything. Second, we want to remind them of when it's appropriate to call. Any spots that are rapidly growing, hot to the touch, red, spreading, draining, or pain that's bad enough that it's limiting what they can do, that's different from our expected soreness and other reactions.

We want to make sure that the nursing staff knows the difference too, since they're the ones that are fielding these calls, and that way they'll be able to know whether we need to get the patient in quickly if it really is a complication or if it's one of our expected reactions. Third, whoever gives the shot should really be in control of the documentation.

Make sure you're putting the site, the side, our needle length, and how well the patient tolerated it, because that's the record that our next person works from. It's also helpful to have a written handout for each injection type. Both manufacturers have patient materials, so you don't have to build out this handout from scratch, but it's helpful to explain all of these reactions to the patient in person while they're there, but we also want to send them home with something that they can refer back to in case they weren't thinking about it and it comes up later.

Dr. Price:

So really good overview, Emma. I think all those are really helpful. So just for the audience, I want to give a couple take-home points. So one, with the shots into the muscle, what patients notice is usually pain, and it really gets better with time, not worse.

The things that help are free, thankfully. We love that. So use the ventrogluteal site. It's safer. Let the medication come to room temperature, relax the muscle in the patient, and push the plunger slowly. And then make sure you use the right needle length for a bigger patient because this can affect the dosing levels of the medication.

And then two, for LEN, remember it's a completely different shot. It goes into the fat, subcutaneous. And the ice and numbing creams beforehand can be helpful. And really what patients notice here is a nodule that can last for months. But we need to tell them about that before that first shot so they know it's supposed to be there and don't call the clinic worrying about it.

And then third, have a really good after-visit discussion, and have an instruction sheet that tells the patient what to expect, what's normal, and what they need to call about. And hopefully all these together will help keep this valuable medicine in patient hands and helping prevent and control HIV.

And so that's our time. Thank you for listening to me and Emma. That was great. I really think these medicines have changed what's possible for a lot of our patients. And really, a sore hip or a lump shouldn't be the reason someone gives up on that. So thanks again.

Dr. Atkinson:

Thank you.

Announcer:

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