Clinical Education Initiative
Support@ceitraining.org

ECHO: WOUND CARE FOR PEOPLE WHO USE DRUGS

David Skovran, ANP

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[video transcript]

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Presenter David Skovran. David has been a nurse and nurse practitioner for 16 years working in the New York City area specializing in primary care. His experience includes inpatient hospital based nursing home care and outpatient primary care. For the past four years, he has been providing outpatient primary care, including the treatment of Hep C and opioid use disorder. He's also currently an adjunct professor at New York University for the primary care program where he leads a seminar group every week to discuss clinical cases and evidence based practice. This includes precepting nurse practitioner students each semester during clinical sessions at Mount Sinai Hospital. So I'll pass it over to you, David. Thank you.

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Thank you so much. Thank you for having me. So this afternoon, we're going to discuss some wound care for people who use drugs. My financial relationships I don't have any. And here are our learning objectives understand risk factors for developing these wounds and abscesses. Learn about preventing infection related wounds and safer use. We're going to do some basic treatment for the wounds going to keep it kind of easy for primary care providers can order the supplies and start the treatment on these patients. And then also know how to, you know recognize and treat any complications that these individuals can get from the wounds. So let's first talk about risk factors. For developing injection related wounds. It's gonna go quickly through these number one is they don't clean the injection site, or wash their hands before injecting, reusing noodle or needles, cookers and cotton's which increased the microbe burden, missing an injection, which normally occurs in the subcutaneous tissue or muscle tissue, injecting cocaine or amphetamines. These are vasoconstrictive and can cause more inflammation in the site. And injecting into areas of the body that already have damage and inflammation or areas have poor circulation. And by poor circulation, I mean people who already have venous disease or diabetes, and then last is someone with diminished immune function.

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And so with that, right, we're always talking about how can we even teach individuals to prevent these moments are happening most important skin hand and skin hygiene before and during injection process, alcohol, alcohol swabs prior to injection, using clean sterile equipment, only using their own supply. And also like avoiding miss shots teaching individuals injection sites that are easy to see and have good perfusion. And then you have your secondary prevention, right. If after they inject you want to make sure that they you can instruct him to apply a warm compressed or blood flow and healing. Avoid touching picking the area which can exacerbate the inflammatory response and then also instructing and teaching how to monitor

for signs of infection, right? Redness, warmth, tenderness and duration. And then the most important is systemic illness, which is more of an emergency as we know fever chills back the cardia tech opinion. So first I want to discuss sort of an abscess which we typically see in injection users. You know, many abscesses will heal on their own. You know, someone will say, Oh, I have some pain, some swelling at this site, and a lot of times in the arm or it will go down on its own without us having to do anything. But then there's others that will require some, you know, incisions and drainage. Typically any abscess greater than two centimeters should be excised. And after excision and drainage packing won't be needed if there is significant depth. And packing options include algisite packing strips or something called algaecide. Both are very absorptive for the exudate. I'm going to talk about those two in a later slide. And then if packings not needed, if it's sort of like a you know, not so deep oven of abscess, you can use antibiotic ointments such as Mupirocin which is Bactroban 2% And that's something that you can prescribe to any local pharmacy. So alginate This is one of the things I said you could You could pack an abscess with these are derived from calcium sodium sodium salts, which is actually a derivative of seaweed, it can be absorbed several times their weight. It designates a really a wet wound, it prevents maceration of the peri wound. And it's useful to fill any kind of cavities pockets undermining, because of its, its moisture retentive. It's not recommended for any wounds that don't have a lot of drainage, because it can actually dry out the wound and then stick to it, which makes it very difficult to remove when you're changing the dressing. And the nice thing about the alginate, it comes impregnated with silver, which is, you know, if you feel like there's a high bacterial load, this will this will offer a good alternative help with that.

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And then Iodoform, we're probably all familiar with iodoform. These are the gauze packing strips, they're sterile single use the call impregnated with Iodoform solution used for sterile drainage of any open and infected wounds. And I like these because they're woven and Ravel resistant so that when you're pulling them out or putting them in the it won't lint or fray, so you know, you're getting everything out. So this is just kind of an image of calcium alginate, it can come in different sizes, it also can come in packing strips. So depending on the size, you can order different, you know, different product based on what you need. And then this is the Iodoform that comes in these sterile bottles, and you just kind of cut the amount that you think that you will need for the packing. And I just want to mention, whenever you pack an abscess or any kind of wound, you never want to overly pack it. We always say that you should only lightly pack a wound, because from it's better for the healing process. So you know, that's the basically like treating an abscess, what kind of wound supplies you'd use. And then you also have to consider like with an abscess is the antibiotics required. And that's going to depend on sort of your clinical your clinical knowledge and what you how you think that the world looks depending on to the drainage, does it have any sign of infection or erythema warmth? Typically, if you are going to prescribe antibiotics you want to cover for Staph aureus, including Mersa.

And so, you know, two good medications that I use a lot my wound care clinic for infections is Bactroban and doxycycline. And then, you know, there are times and you need to consider like does this patient need to be admitted for IV antibiotics, especially if they have systemic symptoms. And then so these are all so infection is one of you know, one of the complications other complications you want to be mindful of is cellulitis, which we all know is inflammation and deeper layers of the skin caused by bacterial infection. It can cause it can can occur secondary to the abscess, or any other group type. And usually, it'll appear red swollen. You can see diffuse patchy or loose borders, it can be painful and tender to touch skin could be warm or hot. You know, it's safe that as this patient is pretty stable oral antibiotics can be initiated. You always want to keep in mind sepsis to, you know, life threatening inflammatory response to the infection. People who inject drugs are always at more risk for sepsis due to the regular exposure of pathogens. And so this sort of story system. hospitalization is normally needed for IV antibiotics, fluids, respiratory support, if needed. And then two other things you always want to keep in the back of your mind is endocarditis, which is you know, the infection and the inner lining of the heart or the bacteria here. So the heart, people who inject drugs are at higher risk due to frequent exposure again, of the external bacteria into the Victoria system. And you always want to watch out for fever, chills, fatigue, night sweats, difficulty breathing, or new heart murmur. And you know, endocarditis person should be immediately referred. And then the last thing I want to mention is something called puffy Hand Syndrome. You don't see it very often, but it's a condition in which long term IV drug users develop chronic pain, non painful hand swelling. It's believed to be caused by a breakdown of the static system, where it causes the lymphatic fluid to build back up and lead to this puffy appearance. Prevention is basically you know, not injecting into that area. And treatment is similar to like if you have lymphedema in your legs, like a compression glove that they would wear To help with the, with the fluid

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so now I'm going to talk about some actually ulcers that can developed in IV drug users. Anyone who has pre existing conditions are going to make them more susceptible to these goals. So you're thinking of chronic diseases like diabetes, hypertension, cancer, heart failure, peripheral vascular disease. Damage to the veins and main valves from injecting drugs in the extremities can exacerbate these problems for people who have poor circulation leading to moods and infection. And the most common type in longtime injection drug users is going to be venous ulcers or from venous disease. So venous ulcers, these ulcers occur when the venous return leads to venous pooling, which is it causes encouragement and rupture and leakage. And eventually the tissues can't compensate for the increased pressure in the legs and the ulcers begin to develop and drain. So typically, for venous ulcers, you're gonna see them on the male you'll or lateral posterior calf, they're usually irregular in margin with pink base, usually oxidative. However, the foot temp is normally warm arterial pulses are present, pain is mild and typically sensation is intact. And you can see like in the leg, you'll see other skin changes like

erythema, some swelling, you could see like brown spotty or diffuse pigment changes in the feet. And the reason I put this is because it's always good to differentiate between Is this a venous ulcer or is this a arterial ulcer? Right? So their tear ulcer typically the wound, the leg is going to be cold, and your pulses are going to be absent. And also the breakdown of arterial wounds is typically on the on the feet next to the toes. So what's the treatment for venous ulcer? Compression, right compression is the mainstay effective venous ulcer care. And on the market, there's two options for compression. One is an inner boot and one is a four layer dressing called a pro four. But prior to applying the compression, right you need to the ulcer needs to be addressed itself needs to be cleaned, topical dressing needs to be applied. And this is this dressing is usually deterrent is determined by the appearance of the wound bed and the amount of drainage. So cleaning wound you want to clean you want to have the individual clean with every dressing change while minimizing trauma to the surrounding skin. So it's recommended ulcers are clean with non cytotoxic cleaners such as saline or water. In general, right, you want to have the patient avoid using iodine any kind of like hydrogen or hydrogen peroxide or alcohol because these will guess clean the wound to get rid of bacteria but it also will destroy any viable tissue which will delay wound healing. So the next step in addressing the wound is does this wound need to deep be debris that is there eschar or what we call sloth tissue on the wound bed, if there are is this right you need to get rid of it right so there's two options with the breeding the one is number one is enzymatic, which is applying an ointment to remove these necrotic tissues. And there's two on the market. One is called collage kinase also known as santal and the other is hyper gel, I typically use collage kinase it's usually covered by insurance. But more recently now pharmacies need to know sort of the size and where the wound is for it to get covered. And then the other option is surgically or sharp. So you know removing that dead tissue using a scalpel scissors and forceps. I you know this is usually saved for an only done on larger tools with eschar or thick sloth you know can be definitely be painful can cause bleeding

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and then you need to decide okay, what am I going to put on the wound bed to help heal it? And on the market? There's a few options I basically basically have to decide on what to put on a wound by the drainage right you Is there minimal drainage or is there a lot of drainage minimal, you can use xeroform hydrocolloid or hydrogel. And for more exudative, you want to go back to like your LG alginate or hydro fibers which is Aqua cell. So hydrogel is what these are, they're water based, they're not inherent right in their hydrophilic. And they can come in a gel, they can come in sheets, they can come impregnated in gauze. And you use these because it provides moisture to the wound bed to to help the healing. The reason why it's not for heavy drainage is because if you're putting something wet on something that's already draining a lot, you're just going to macerate the skin, the surrounding skin and in then cause that to break down. So the hydrogel that's pretty often used in order to solo site and also like I mentioned

before Bactroban mupiricin also a good option for something if you're looking for a hydrogel because it will provide that moisture that you're looking for. So this is xeroform, this is probably my number one choice for a, a venous ulcer that is has little to moderate or small amount of drainage. It comes in like the sterile mesh gauze impregnated with a blend of Bismuth which is petroleum. I like it because it's not inherent to the wound. And it helps maintain a moist environment. So when you put this on and then you want to like change the dressing because it becomes because it's impregnated with gauze and it's wet, a little wet, it comes off very easily and it doesn't cause the patient any pain. And then lastly, I just want to mention, skin popping and muscling. So skin popping is the injection of drugs into subcutaneous tissue or the extra dermal spaces and muscling is right it's injection to the drug into your muscular both can be damaging to body tissues. People who choose these injection practices just because they have collapsed or scarred are difficult to find veins and muscling also offers an easier choice of sites to hide injection use. Wounds related to skin popping and muscling are not a specific type of wound but uh usually present as like an abscess which we had discussed cellulitis and then scarring from repeated and multiple injections. You know, education in on prevention is important you know, you should always offer support and education around other routes of ingestion that may minimize these risks can educate on phlebotomy and injection technique. If muscling is preferred is recommended enjoy was taught the importance of hygiene that we discussed earlier, rotating injection sites proper filtering of drugs to reduce the risk of injury and infection and it's also recommended that the drug be heated cooked prior to reduce the risk of infection. So that's my quick little rundown on wounds will take any questions
[End Transcript]