

Jonathan

Case

- Jonathan is 40-year-old man with a BMI of 29 kg/m² and a 3-year history of type 2 diabetes who presents in January for a biannual checkup
- He states that he has been exercising and watching his diet and that he has been “feeling great”
- Physical exam reveals no abnormalities on vital signs normal and no weight gain since his last visit
- Recent lab results indicate that his blood glucose is well controlled (HbA_{1c} = 6.9%) and slightly elevated triglyceride levels (160 mg/dL)

PCP Discussion

Dr. Flores: Okay. This is the last case. We have a 40-year-old with diabetes. He seems to be in fairly good control of his diabetes, with a hemoglobin A1C of 6.9%, and he’s coming in in January. So the first question is, “What vaccines do you administer and why?” This suggests that he hasn’t had a flu shot. Although it doesn’t say that, it says this is his bi-annual checkup, and there is no mention that he’s had it, so I would definitely recommend an influenza vaccine for a diabetic in January. And then I would probably consider giving him some kind of pneumonia vaccine as well, because he is diabetic, so he has a bit higher risk for pneumococcal disease. Ordinarily, we might not consider giving somebody a pneumococcal vaccine until they’re over 65, but I would at least have a discussion with him about it, and see if his insurance will cover it. I would probably give him the pneumococcal conjugate 13-valent vaccine (PCV13) first, but I don’t know if there’s a strong evidence or strong recommendation for that.

And then, that’s probably it. The other two that we’re focusing on are the tetanus, diphtheria and acellular pertussis (Tdap) vaccine and the herpes zoster vaccine, and again, maybe the only reason I would recommend the Tdap vaccine to him is if there is some possibility of children being born, or infants that are under his care. He’s 40 years old, and I don’t know where he is with respect to that situation. So I would definitely recommend a flu vaccine, and probably a pneumococcal vaccine, and perhaps with further discussion, the Tdap vaccine. And then, as for whether any vaccines should be avoided...I can’t think of any contraindications. I’m not sure, but I don’t think that even with diabetes he would qualify for coverage for the herpes zoster vaccine, but I don’t think there’s any reason to advise him not to do it, other than the guidelines.

Dr. Irvine: We do find a lot of people in their 40s, with really no indication or recommendation for a herpes zoster vaccine, and who have had an episode of

shingles, are very insistent that they get this vaccination. A lot of times you have to do education about the indications for vaccinating individuals in certain age groups, and who is at risk. Sometimes we just give them a prescription and send them to the pharmacy, and they have to decide based on how much it costs, and whether they're going to take that risk of paying \$100-plus dollars for a vaccination that isn't indicated for someone in their age group. That's fairly common practice here.

Dr. Wilson: Dr. Cullen, anything you would add to that?

Dr. Cullen: I would agree with the other doctors that the herpes zoster is not indicated until they're 50, and usually it wouldn't be covered, so I don't know if I would be comfortable even giving them the prescription based on their age. I would probably tell him that he will have to wait until he's 50. Otherwise I would definitely give him the pneumococcal vaccine, probably both pneumococcal vaccines—or offer them to him at least—along with the Tdap and influenza vaccines.

Dr. Wilson: And the rationale for herpes zoster vaccine for people over 50, is that not because the disease is worse as people get older?

Dr. Cullen: Yes, I think that is the premise. Because as people get older, they have more risk of post-herpetic neuralgia, or chronic pain from the shingles.

Dr. Irvine: And I think, too, as you age, you have so many more comorbidities that affect your immune system. So if you get sick with pneumonia, then you can have a shingles outbreak soon after that.

Faculty Wrap Up

Dr. File: Hello, this is Dr. File, back again to provide commentary and conclusions regarding the final panel discussion in our series.

Patients with diabetes, like Jonathan, have abnormalities in the immune function that increase their risk for infectious diseases, especially pneumococcal pneumonia. As Dr. Flores states, this patient needs to be immunized against the flu and against pneumococcal disease, and he should have the Tdap vaccine as well.

A bit different from the panelist's viewpoint, the Advisory Committee on Immunization Practices (ACIP) recommends that patients with diabetes between the ages of 19 and 64 years receive the 23-valent pneumococcal polysaccharide vaccine (PPSV23), rather than the PCV13. Again, as for Robin and Bernie, it is

important to recognize the difference regarding recommendations for adult vaccines. Yes, Jonathan likely has some abnormalities in immune function, but for purposes of ACIP recommendations, he is not considered immunocompromised. This group includes people with more severe changes in their immune system, such as those associated with asplenia or organ transplant, or people with a congenital immunodeficiency. Patients like Jonathan would receive one dose of the PPSV23, and at age 65, would receive the PCV13 followed by another dose of the PPSV23, administered six to 12 months later—as long as it has been five years from the prior PPSV23.

ACIP recommends that all adults receive the PCV13, but those with immunocompromising conditions should receive it before age 65 and all others should receive it at or after age 65.

Now, like Dr. Irvine, I also see patients in their 40s who express questions about the herpes zoster vaccine. I tell these patients that their risk both for having an episode of shingles and having serious complications due to shingles is minimal during their 40s relative to their 50s, 60s, 70s, and so on. I tell them it is best to wait until at least age 50, congruent with the US Food and Drug Administration (FDA) indication for the vaccine. However, until they are age 60, most insurances will not cover the vaccine, so they would need to pay out of pocket. It is also important to note that immunity to herpes zoster wanes at about five years after vaccination, which may be another reason to delay immunization.