Medical Management of Tuberculosis: An Online Presentation

Question and Answer Session

1. If you get your sensitivities back before the initial two months is completed and you find out that the organism is sensitive to all four drugs, can you eliminate the ethambutol (EMB) or the pryazinamide (PZA)?

2. How many people in the clinic use the directly observed therapy (DOT) seven days a week versus five?

3. There are physicians who are resistant to the idea of DOT, whether their patients are on daily or intermittent dosing. What do you do when a physician refuses DOT?

4. What about a physician who threatens to not report further TB cases if you go against his or her wishes?

5. What do you recommend doing if a physician agrees to DOT but will not prescribe the right regimen?

6. What do you recommend doing if the physician does not want to do the four drugs?

7. What is the difference between chest X-ray and the CT scan as far as the implications of cavities and duration of therapy?

8. What would you do about starting treatment if you are seeing an otherwise healthy young adult who had a relapse after completing TB treatment two years ago?

9. A 78-year-old woman presents with a pleural effusion. The smear showed acid-fast bacilli, but nothing grew in culture. Is the physician's plan to treat her for six months with isoniazid, rifampin, and pyrazinamide okay?

10. We have a real problem getting sputums from patients after they're on their drugs because they don't produce so much. What do you do?

1. **If you get your sensitivities back before the initial two months is completed and you find out that the organism is sensitive to all four drugs, can you eliminate the ethambutol (EMB) or the pryazinamide (PZA)?**
   Can you eliminate the PZA? Technically yes, but if I eliminate it before a full two months have been taken, I would have to treat for a minimum of nine months. PZA is required for the full two months in order to use short-course therapy. Can we stop the EMB once we know that the organism is susceptible? Yes. There is some data to show that there's better effectiveness with all four drugs, but it is absolutely OK to stop the EMB early. Sometimes it's easier to do the two things at once (i.e., stopping both the EMB and PZA at two months) than making two different changes. On the other hand, I frequently stop EMB when I get the susceptibilities back because it's a little bonus to the patient that we get to stop one of the drugs. That way, the patient knows that you're doing everything you can to use as little medication as possible.

2. **How many people in the clinic use the directly observed therapy (DOT) seven days a week versus five?**
   I'd be surprised if very many programs offered seven-day-a-week DOT. Most of us cannot afford the overtime. The national guidelines say that five is as good as seven. Most patients are compliant with the Saturday and Sunday doses. We blister-pack medications so we can count the doses and see if the patient is taking the medications on the weekend.

3. **There are physicians who are resistant to the idea of DOT, whether their patients are on daily or intermittent dosing. What do you do when a physician refuses DOT?**

It is very important to remember that the decision about whether or not DOT is indicated and will be given is the public health department's decision, not the physician's. It really is not up to the physician to decide. Your responsibility as the public health department is to protect the community. You have to do what is best for the public's health whether the physician is on board or not. Obviously, it is important to try as hard as possible to make the decision collaboratively, but sometimes you simply have to say, "This **is the way it will be."**

4. **What about a physician who threatens to not report further TB cases if you go against his or her wishes?**
   I've heard a variety of threats like this, but I don't usually take them at face value. Most physicians really want to do the right thing and don't want anything bad to happen in the community. In this case, if I'd tried everything to rationally explain why we're doing what we're doing and to answer the physician's concerns, I would probably say, "I'm shocked that you would go so far as to put the community at risk because of a personal issue that you have."

   Often the issue is that the physician feels the relationship will be compromised if the patient feels that the physician went along with the Health Department. I usually tell the physician to feel free to make me the bad guy and to go ahead and commiserate with the patient; just don't undermine our work.

   I also have written letters to MDs explaining that DOT is mandated in this county under my order and will commence on such and such a date. In the very unlikely circumstance that a physician threatens to "not report TB," I remind the physician that California statute (similar to that of most other states) requires him or her to report. Failure to do so can lead to disciplinary action and fines.

   Depending upon your agency's structure, it's your TB controller and/or medical director who has to draw a line in the sand and communicate what is mandatory.

   As a public health officer in communicable disease control, my primary responsibility is to the community, and that means I'm going to do whatever is necessary, as long as I'm being ethical and taking the patient into account as much as possible, to be sure that that person no longer represents a risk to the public's health.

5. **What do you recommend doing if a physician agrees to DOT, but will not prescribe the right regimen?**
   Well, it depends on what the right regimen is. If you mean the physician wants to do daily instead of biweekly, that is OK. It's expensive, but it's an acceptable regimen. I have not had the experience of a physician continuing to insist on a regimen that is truly contraindicated after having that contraindication explained to him/her.

6. **What do you recommend doing if the physician does not want to do the four drugs?**
   Oh, now that's different. That's a standard of care issue. Again, what you do is send them three key pages from the national guidelines on the treatment of tuberculosis: (1) the page that dictates which drugs are required, (2) the page that says that culture conversion documentation is required, and (3) the page that talks about DOT. Highlight the relevant sections that say that this is the standard of care. I've never had a physician refuse to change when it's presented this way. You really do need to explain why you recommend the four-drug regimen or DOT because physicians are protective of their patients and their practice. Always remember that most physicians want to do the right thing by their patients. They're just not very used to anybody looking over their shoulders.

7. **What is the difference between chest X-ray and the CT scan as far as the implications of cavities and duration of therapy?**
   Well, you know that CT scans are much more sensitive. When you have a patient with a chest X-ray that's got a lot of infiltrate but no obvious cavitation, and you put that person through a CT scanner you're often going to see small areas of cavitation.

   We know that people with cavities on chest X-ray reactivate at a high rate if treated for only six months. With cavitation on CT, we're not really sure. With people who have cavitation on CT but not on chest X-ray, there haven't been large studies done that follow them through completion of therapy and through the two to five years of follow-up that are needed to see if they're going to reactivate.

   Because it is easy to extend that continuation phase to nine months total, I will treat patients who have cavitation on CT for nine months, but I'm not going to force a provider to do so who doesn't want to. I'll talk to them about it and why my feeling is that it's better to treat longer. Usually by the time you get to six months, patients are into the groove. It's not that hard to go nine months when they've gone six months. It's that first couple of months that are most difficult.

8. **What would you do about starting treatment if you are seeing an otherwise healthy young adult who had a relapse after completing TB treatment two years ago?**
   Here is a setting where you would again start with the usual four drugs until you get the susceptibilities back. Studies have shown that most reactivation TB is drug-sensitive.

9. **A 78-year-old woman presents with a pleural effusion. The smear showed acid-fast bacilli, but nothing grew in culture. Is the physician's plan to treat her for six months with isoniazid, rifampin, and pyrazinamide okay?**
   That's actually appropriate, except that I would have the patient on four drugs, not three drugs, for six months. Mycobacteria often do not grow from the pleural fluid because the infection isn't in the pleural fluid. It's in the pleura, the tissue. This is a tissue-based infection. The pleural fluid is a result of the inflammation, and so it really has to be pretty overwhelming for there to be many organisms in the fluid. Also remember that up to 70% of people with pleural tuberculosis also have pulmonary tuberculosis, so unless you have a CT scan or other imaging that shows you that those lungs are totally, pristinely clean, I would ask for sputums to rule out contagious disease. If the clinician says, "No, I don't want to do sputums," then I would call and say, "Please provide me a chest X-ray or CT that shows me that the parenchyma of the lungs are completely clear of disease." If I have to do the sputums myself – even though I'm not the provider – I will. We will bring the patient into our clinic and do the sputums ourselves at our cost because it's our responsibility to protect the public.

10. **We have a real problem getting sputums from patients after they're on their drugs because they don't produce so much. What do you do?**
    We induce sputums in every patient where sputums are necessary and the patient cannot spontaneously produce an adequate specimen.