

## Michael Manages Side Effects of Chemotherapy

Welcome to the podcast for Chapter 11 of *Understanding Medical-Surgical Nursing*. In this episode, we'll review common side effects of chemotherapy, along with related nursing care.

Michael was a veteran on his unit. He'd been an LPN for 28 years, and the RNs often came to him for advice or information. As an LPN, Michael couldn't administer IV chemotherapy, but that was fine with him. His specialty was helping patients feel better when they developed chemotherapy's inevitable side effects.

Just this morning, he took care of Robyn. She had breast cancer and was admitted for her first dose of chemotherapy. The remaining doses she'd receive as an outpatient. Michael knew that Robyn would lose her hair, so he took time to sit down and ask her if she felt prepared. Then he took her to the wig room where she could look at some of the hospital's donated wigs. He knew it was best to do this while Robyn still had her hair, so she could choose a color most like her own. Robyn chose a pretty headscarf instead of a wig, and she thanked Michael for his kindness.

Michael was also caring for Mr. Woo, who was admitted yesterday for side effects of stomach cancer treatment. Mr. Woo had received his third chemo treatment just over a week ago, and now his blood counts were in the basement. Michael knew this was his nadir, and that all his blood cell counts would be low. Mr. Woo was on neutropenia precautions, so Michael put a sign on his door warning visitors to please enter only if they were healthy, and to please wash their hands before entering.

When Michael saw the dietary aide start into Mr. Woo's room carrying a lunch tray, Michael grabbed the fresh apple from it just in time. The aide looked over in surprise, and Michael explained that fresh fruits and vegetables could have germs on them that would cause infection. All fresh fruits and vegetables must be thoroughly washed before eating.

Later, on his afternoon rounds, Michael washed his hands carefully and then went in to check on Mr. Woo. The patient looked good. Michael examined the PICC line in Mr. Woo's arm, because IV sites make good breeding grounds for infection. Michael saw no redness, swelling, or drainage—although with a low white blood cell count, symptoms were unlikely because there just weren't enough cells to create drainage.

Mr. Woo said he hadn't been coughing, and his lung sounds were clear, but his temperature was 99 degrees Fahrenheit. Michael would have to watch carefully for any signs of infection to show up.

Then Michael checked Mr. Woo's urinal, and although the urine was clear, it seemed a little pinkish. Definitely not a normal color. Was Mr. Woo bleeding because of thrombocytopenia, Michael wondered to himself? He checked his worksheet and noted that Mr. Woo's platelet count was 52,200 per cubic millimeter—dangerously close to the 50,000

level at which patients could spontaneously bleed out. Michael looked for other signs of bleeding and found some bruising on Mr. Woo's legs. It looked as though he'd bumped into the furniture. Michael explained to Mr. Woo that he'd have to be very careful not to injure himself until his platelet count was closer to normal. He also asked what kind of razor and toothbrush Mr. Woo used. A cut while shaving could mean major trouble for someone with a platelet count of 52,000, and Mr. Woo would have to use a really soft toothbrush, or maybe even a sponge toothette, to keep his gums from bleeding.

Just as Michael was leaving the room, Mr. Woo sneezed and then called Michael's name. He was holding a tissue soaked with blood, and blood seemed to be pouring from Mr. Woo's nose! Michael knew to stay calm because nosebleeds often look much worse than they really are. He had Mr. Woo sit up and lean forward just a little, and then very quickly put on a pair of gloves and grabbed a tissue to put pressure on Mr. Woo's nose to try to stop the bleeding. After five minutes, he let up a little on the pressure, but the blood came whooshing out again! He quickly grabbed a fresh tissue and got back to work putting on the pressure. And he pushed the call button for help.

Two minutes later, Lynn, one of the nursing assistants, popped her head in the door. "Whoa," she said, "I'll get the RN." Beth was there a few seconds later, and by the time she got some gloves on and took a look at Mr. Woo's nose, it seemed to have stopped bleeding. "Good job," she said to Michael. "You always know just what to do, don't you?" Michael thanked her for the compliment and took the opportunity to mention Mr. Woo's 99-degree temperature. Beth said she'd let the oncologist know.

When they'd gotten Mr. Woo cleaned up, Michael positioned a chair beside Mr. Woo's bed and asked if he understood what was happening. Mr. Woo told Michael that he'd been given several booklets about chemotherapy, but that he wasn't very good at reading English, so he'd only looked at the pictures. Michael explained carefully that chemotherapy was designed to kill cancer cells but that it also sometimes attacked other rapidly dividing cells, like blood cells.

"This is most likely to happen about a week after you get a chemo dose," Michael explained, "during a time called the nadir." Michael further explained that people have three kinds of blood cells: white cells, red cells, and platelets.

"Since white cells fight infection," Michael explained, "your risk of infection increases if these cells drop too low. That's why we check your temperature so often, and watch your urine, and check your IV site for signs of infection. That's also why your grandson with the runny nose isn't allowed to visit. It would be way too easy for you to get a cold right now."

Michael continued by explaining that red blood cells carry oxygen to the tissues. "If you have a low red cell count, called anemia," Michael said, "you could feel tired or even short of breath."

Mr. Woo commented that he had felt really tired lately. Michael said, “That’s why I’m here. If you’re too tired to do something, just call. I’ll help you out. Also, Beth is going to teach you how to give yourself a medication called Procrit that will build up your red cells again—but not until you’re past this bleeding risk.”

Finally, Michael explained that platelets clump together to form blood clots. That’s why, because Mr. Woo’s level was pretty low, he had the nosebleed. To help Mr. Woo understand the signs of bleeding, Michael found a pamphlet that had pictures of bruising, bleeding gums, and bleeding cuts. He said, “Just as we put pressure on your nose, you should put pressure on something that’s bleeding. If it’s still bleeding after 5 or 10 minutes, call your doctor, because that’s too long. But the *best* thing you can do is not bleed in the first place. That means protect yourself from bumps and falls, wear shoes to protect your feet, and use an electric razor and a soft toothbrush to prevent any tissue injury.”

Mr. Woo was looking tired, so Michael told him they’d talk more later. Mr. Woo waited till Michael threw his gloves in the trash, then took his hand and held it tight. “Thank you,” he said. “I’m really glad you’re my nurse.” Michael was glad, too. He was thankful to have a job he loved, where he knew he made a difference every single day.

In this podcast, Michael reminded us about the side effects of chemotherapy, how to prevent them, and what to do if they occur.