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# 5 patients at Cape hospital at risk for rare brain disease

*'If I was a patient I would not consider myself at risk.'*

DR. AL DEMARIA,  
state epidemiologist

Five patients at Cape Cod Hospital may have been exposed to a rare, deadly brain disease during spinal surgery performed with a potentially contaminated instrument that was previously used at a New Hampshire hospital where patients also may have been exposed.

The instrument, a needle-shaped probe used to help surgeons operate on hard-to-see structures, was used in May at Catholic Medical Center in Manchester, N.H., to operate on a patient who later developed symptoms of Creutzfeldt-Jakob disease. That patient died last month.

Cape Cod Hospital borrowed the equipment from the manufacturer, Minneapolis-based Medtronic, on June 7, hospital spokeswoman Robin Lord said. Surgeons there used it to perform spinal operations on five patients until Medtronic notified the Hyannis hospital Aug. 28 that the instruments could be contaminated and must be quarantined.

Another unnamed hospital borrowed the instruments before Cape Cod Hospital received them. Massachusetts public health officials said that hospital was out of state but would not identify it.

They said the risk of the five patients contracting the fatal disease is very low. In part, that is because those patients underwent spinal surgery and not brain surgery, health officials said.

"It's as close to zero as you can get," said state epidemiologist Dr. Al DeMaria. "If I was a patient I would not consider myself at risk." Yet, he said, it's understandable for patients who were notified to be anxious. "I would worry about it," he said.

During a telephone call with reporters Thursday night, Cape Cod Hospital officials said they finished notifying the five patients earlier in the day. They declined to provide the patients' genders, ages, or other details to protect their privacy.

Creutzfeldt-Jakob disease, which eats away the brain, can take years to develop and there is no cure. It is marked by rapid mental deterioration that resembles dementia. Most people eventually lapse into a coma.

Health officials said there are only four known cases of patients contracting the disease during medical procedures, and the last one was about 40 years ago. In those cases, patients developed the disease within a year or two, hospital officials said.

"Those patients [who were notified] will be followed in our office for quite some time," said Dr. Paul Houle, chief of neurosurgery at Cape Cod Hospital.

It is common for hospitals to rent or borrow expensive surgical equipment from manufacturers rather than buy it, particularly for orthopedic operations and neurosurgery, said Gail Horvath, an operating room nurse and patient safety analyst at ECRI Institute, a Pennsylvania-based organization that researches medical devices.

For some procedures that are done infrequently, "the expense related to buying the equipment, you would never have a return on your investment," she said.

Horvath does not believe borrowing equipment increases risks to patients — as long as hospitals follow the same sterilization procedures as they do with instruments they own. "You have the same problems you have with loan instruments as you do with your own instruments. They are becoming more complex and more difficult to clean," she said.

Officials at Catholic Medical Center said its surgeons had operated on eight patients with the potentially

contaminated probe before they learned the patient who underwent surgery in May had developed symptoms of Creutzfeldt-Jakob disease. The eight patients underwent neurosurgery and have been notified of their potential exposure, the officials said during a news conference Wednesday.

When Medtronic notified Cape Cod Hospital on Aug. 28, the company said it believed the instrument had been used on three patients at the hospital, said Gigi Dash, director of infection prevention at the hospital. The hospital reviewed its surgery records for craniotomies, cervical laminectomies, and spinal fusions and discovered two of those patients were potentially at risk, as well as three additional patients, she said.

Creutzfeldt-Jakob disease is unlike the vast majority of infectious diseases because it is not caused by bacteria, a virus, or a fungus, but by abnormal proteins called prions. About 200 cases a year are reported in the United States.

Several experts said standard sterilization procedures used before every operation, including detergents and high-pressure steam autoclaves, do not protect against Creutzfeldt-Jakob disease. It “supposedly adheres well to many surfaces and is very difficult to remove,” Horvath said.

Bleaching for long periods of time can work, but that can damage sensitive instruments, and other effective chemicals can leave dangerous residue or otherwise harm the tools.

But Dash said she believes the methods used by Cape Cod Hospital, which go beyond what some other hospitals do, destroy the vast majority of the prions. “Is it absolutely sure there is not one prion remaining? No it’s not absolutely sure. That is one of the reasons we contacted our patients,” she said.

Dr. Donald Guadagnoli, the hospital’s chief medical officer, said the probe went “through four different sterilization processes at least” by the time Cape Cod borrowed it. “When it came in, we put it through its own sterilization process here. That is why the risk is low.”

“The reality is there are a lot of risks to undergoing surgery and most are substantially more significant than this,” he said.

DeMaria, the state epidemiologist, said there is debate about which, if any, sterilization procedures can get rid of prions on surgical instruments. But given that no one knew that the New Hampshire patient had the disease at the time of the original surgery, he does not believe any additional steps could have been taken to protect patients.

“The company and hospitals did everything they were supposed to do,” he said.

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