



The newest addition to the Medical City surgery team has nerves (and everything else) of steel

The Medical City, a tertiary health care facility in Ortigas Avenue, Pasig City, has a new medical assistant. His hands don't shake, he never gets tired, and he never panics. He also doesn't talk much, being a robot.

Medical City's recently acquired da Vinci system is the first in the Philippines and is the safest method of performing prostatectomies, the removal of the prostate gland. The da Vinci has four tiny arms that hold a camera and surgical tools that a (human) surgeon controls from a nearby console.

Why would anyone want four mechanical fingers near their privates? In prostatectomies, smaller is always better.

In open surgery, the traditional method of removing the prostate, surgeons have to slice open the abdomen to get to the prostate. With your pubic bone in the way, even skilled surgeons will find it difficult to remove the gland without complications. Dr Eugenio Ramos, head of the Medical Services Group at the Medical City in Ortigas, says that in some cases, complications during surgery sent patients to the Intensive Care Unit for up to two weeks. Because of the risk, many doctors are "almost afraid to have patients undergo open surgery now.

Laparoscopic surgery, a minimally invasive technique, is safer. This lets the surgeon perform the prostatectomy with special metal tubes inserted in small incisions in the body. Because the incisions are smaller, there is less risk of complications, less blood loss, and recovery is quicker.

“You have your ‘hands’ under that bone, which you couldn’t do with open surgery,” Dr Jose Vicente Prodigalidad, a urologist at Medical City says.

Laparoscopic surgery is not without its drawbacks, though. The surgery tools used can only open and close, so there is no articulation and it’s still possible to inadvertently cut something else. Prodigalidad says there is a risk of incontinence if surgery goes wrong. Statistics from Mt Sinai Medical Center in New York report 16.6% of laparoscopic procedures develop complications against just 6.6% with robot-assisted surgery.

One advantage that robot-assisted surgery has over laparoscopic procedures is in the imaging. The cameras used in laparoscopic surgery can only present the procedure in a flat 2-D format. The da Vinci system can show the operation in 3-D, and can zoom in up to 10x magnification. It also has wrist and finger movement giving surgeons increased dexterity and precision.

No Rise of the Machines

Technophobes have no reason to worry. Procedures using the daVinci system will not leave patients in the hands of some cold, unfeeling machine. The daVinci is only a tool and cannot think or act on its own. In fact, if the surgeon looks up from the daVinci eyepiece or lets the controls go, the daVinci stops working. As Dr Jason Letran, also a urologist at Medical City, tells reporters at the press briefing on the daVinci robot, it is the man behind the machine that matters.

The real doctors, the ones operating the machine, undergo special hands-on training proctored by an expert in robotic surgery. This is on top of the years of medical school, fellowships, and certification courses. After all, as Letran says, “a fool with a tool is still a fool.”

As this magazine went to press, the daVinci system at the Medical City had already performed two prostatectomies, adding to the 205,000 procedures that have been performed with the system by late last year. The two patients were up and about within days of their operation.

After all, much like the Hippocratic Oath, science fiction author Isaac Asimov’s First Law of Robotics states, “A robot may not injure a human being or, through inaction, allow a human being to come to harm.”

Domo Arigato, Dr Roboto

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