Inter-continental robot surgery

Doctors can control surgery from thousands of miles away

Surgeons in the US have successfully used computers and robots to take part in operations in a different continent.

Researchers from the influential Johns Hopkins University in Baltimore have revealed that they now have the technology to carry out "telesurgery" on patients anywhere in the world.

Already 17 patients undergoing surgery at Rome's Policlinico Casilino University have benefited from the technological advances.

US doctors used a combination of computers, telecommunications, videoconferencing and advanced surgical robots to guide surgery that was actually being carried out thousands of miles away.

None of the patients suffered any adverse effects.

Surgical robots augment a surgeon's ability by scaling down range of motion, providing three-dimensional vision and eliminating hand tremor.

The robotic systems consist of a surgeon's viewing and control console and a cart with robotic arms that sits next to the patient.

Laparoscopy
Fourteen of the patients underwent a laparoscopy. This involves inserting a thin fibre optic scope into the body.

Of these, eight underwent a procedure correct a fault with the blood supply to the testicles, and the six others underwent work on their kidneys.

The three other operations also involved surgery on the kidneys.

Fourteen of the patients had surgery to treat problems with the blood supply to the testicles.

Laparoscopic surgery is performed with only a minimal incision so the patient experiences less pain and blood loss and has a shorter recovery time.

However, surgeons need extensive training to use the technology.

The Johns Hopkins technology allows experienced surgeons at a remote site to guide others through the procedure.

**Connection stopped**

In seven of the 17 procedures, the telesurgical connection was stopped and the operations were continued only from the primary site.

Two of the 17 were converted to open surgery and during one of the kidney-related procedures problems developed with a manual control for a robotic device.

Dr Dan Stoianovici, director of the robot laboratory at Johns Hopkins, said: "This is still an experimental project.

"If robots improve and we are really able to do all kinds of surgery, you could see a single surgeon sitting at a console switching from one surgery to another around the world."

The Johns Hopkins team revealed details of their work at a meeting of the American Urological Association in Anaheim, California.