



Could Robots Replace Surgeons?

Robots are already infiltrating many facets of our daily lives. Driverless cars are in the advanced stages of testing in certain parts of the world, drones are scheduled to begin delivering packages to domestic households within the next few months and precision farming uses the sophistication of AI to achieve optimum results.

So what about the operating theatre? Will robot surgeons supplant human ones as the scalpel wielders of the 21st century? Well, the truth is that machines have already made significant inroads into the medical world and are becoming more heavily involved in the surgical world than ever – including in the United Arab Emirates.

Two breakthrough procedures

The Al-Kuwait Hospital in Sharjah played host to two ground-breaking cases of robotic surgery last month, as advanced automaton technology was involved in highly complicated procedures. The achievement marks out the hospital as one of the most advanced in the Middle East and furthers the progress that robots have made in the world of surgery in the UAE.

The first procedure involved a patient who was suffering from malignant cancer cells in their larynx. After the requisite medical examinations were undertaken, the team at Al-Kuwait decided upon the use of a robot to conduct the surgery, since there are multiple complications associated with making an incision in the front of the throat, as the surgery has been traditionally performed. By using the robot, the team were able to remove the tumour via the mouth, thus avoiding the normal consequences which impact the patient's speech and swallowing capabilities.

The second procedure was geared towards alleviating the sleep apnoea that had been instigated by an enlarged tongue. In both instances, the operation was a complete success, perhaps heralding a new age of robotic involvement in surgical procedures.

A long way to go for the automatons

While the events over at Al-Kuwait are exciting news for the future of the industry, the robots involved still required constant supervision from highly-trained medical staff to ensure the operations came off without a hitch. The precision and reliability of robotic technology can offer significant advantages in the world of surgery, but an autonomous team of robot surgeons is still some way away.



As such, it's less a case of robots replacing surgeons and more one of them supplementing their medical team. With the ability to provide high-definition video footage and magnification, as well as computerised assistance and specialised instrumentation, robots can enhance the capabilities of human surgeons, but they can't fully replace them – yet. Perhaps such an occurrence will happen one day, but that eventuality is still far, far away.

One development which could be far closer to actuality is [robots replacing lab rats](#) in the classroom and in the laboratory. A recent study from the Florida Atlantic University demonstrated how laptop-sized robots could be used as surrogates for rats in classic psychology experiments, thus taking the first step in phasing out animals in the lab.