



HYGEIA GROUP

D.T.C.A. hygeia

23.10.2008

PRESS RELEASE

Robot-assisted microscope: Latest advance in Modern Neurosurgery for brain tumour resection

The first brain surgical operation combining a neuronavigator with the PENTERO robot-assisted microscope was successfully carried out in Greece at HYGEIA Hospital. The operation was performed at the Neurosurgical Clinic of HYGEIA, by **Mr. Michael Torrens, Neurosurgeon and Director of the Clinic**, on a 54-year-old patient using the automated "Steath Station" neuronavigation system that was connected to the PENTERO surgical microscope.

After the end of the operation, **Mr. M. Torrens**, newly-elected president of the International Radiosurgery Community "Leksell Gamma Knife Society", stated that "Brain operations require the highest possible precision and any incorrect estimate could be fatal. The new system offers the patients the best available level of neurosurgical equipment in Greece."

Neuronavigation is a computer system that displays a real-time, 3-dimensional model of the brain, including the tumour and the vessels, on a monitor placed close to the patient's head. The positions of the surgical tools are displayed on the PC monitor allowing the surgeon to view the operation site and to open precise incisions without affecting the adjacent structures.

Connected to a neuronavigation system, the robot-assisted microscope enables the surgeon to view this 3-dimensional image of the brain surface through the microscope lenses and to accurately locate the tumour site. A connection between the computer navigation system and the automatic laser zoom robotic system of the microscope enables regular updates of the image so as to display the tumour in any selected depth.

During this procedure, which took place for the first time in Greece, this virtual navigation system was projected into the optical system of the PENTERO surgical robotic microscope.

The result is to perform safer, faster and more successful surgical operations using smaller incisions with faster recovery and lower complication rate; a true technological revolution.

This method complements the existing robotic Gamma Knife radiosurgical method used at HYGEIA hospital. The Gamma Knife system can treat tumours of diameter less than 3 cm without any incision.

For tumours larger than 3 cm, the Pentero robot-assisted microscope is the perfect technological solution.

DIAGNOSTIC & THERAPEUTIC CENTER OF ATHENS HYGEIA S.A.

✉ 4, Erythrou Stavrou Str. & Kifisias Av., GR 151 23 Marousi, Athens, Greece | ☎ +30 210 686 7000 | 📠 +30 210 684 5089

📧 info@hygeia.gr | www.hygeia.gr