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PRESS RELEASE

A new dimension in cerebral neurostimulation for patients with movement disorders

In the Diagnostic & Therapeutic Center of Athens, HYGEIA, a **rechargeable neurostimulator was implanted for the very first time** in Greece in a patient with severe segmental dystonia. To date, recharging the power sources of cerebral neurostimulators has been technically impossible.

In diseases like dystonia and treatment-resistant obsessive-compulsive disorder, a large amount of electric power should be delivered through selected cerebral nuclei. In other words, many patients with these diseases, who responded to neurostimulation, had to replace their power source frequently (every 1 to 1.5 years). It is also reported that in cases of Parkinson's disease or essential tremor the power source of surgically-implanted neurostimulators should be replaced every 5 years on average. The power source of a rechargeable neurostimulator lasts 9 years.

The **new generation of neurostimulators** offers many advantages as they include more parameter combinations, thus enabling a differentiated potential of neurostimulation, and require a lower power dose than older neurostimulators. In this way, the patient's life quality is improved and any current-related adverse events are decreased in regions adjacent to the target nucleus.

The most recent international studies, which also include patients with dystonia hospitalized in HYGEIA, show the long-term clear advantages of the "deep cerebral stimulation" for patients with focal, segmental and generalized dystonia. The currently treated patient showed remarkable response in terms of her dystonic symptoms within one day.

Operations of "deep cerebral stimulation" are successfully performed in the Diagnostic & Therapeutic Center of Athens, HYGEIA. Since 2005 more than 60 neurostimulators have been implanted by the "deep cerebral stimulation" team consisting of the neurosurgeons, Charalambos Stroggylos, Charalambos Sepheris and Panayotis Nomikos under the scientific guidance of the neurosurgeon, Michael Torrens, and the neurologist-neurophysiologist, Ioannis Velentzas. HYGEIA has also entered into agreements with large insurance funds to cover such operations.