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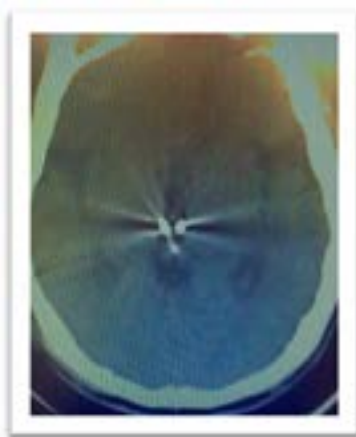
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Deep brain stimulation for uncontrollable aggressive behaviour: The benefit beyond our expectations

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Deep Brain Stimulation (DBS) is a procedure, available for movement disorders, and for some psychiatric conditions that do not respond to pharmacological options such as aggressive and uncontrollable behaviour. A woman with perinatal hypoxia, delay of milestones and severe mental retardation, developed hyperphagia, severe impulsivity with uncontrollable aggressive behaviour; she was always under surveillance, required physical restriction and was isolated in her house, being dependant for all activities of daily living. The second patient was a 24 year man, with severe mental retardation, impulsivity and uncontrollable aggressive behaviour, hitting even his parents and anybody nearby. He also has epilepsy with frequent seizures. The last patient was an 18 year man, with normal development. At the age of 14, he presented generalized epilepsy. Since then, his behaviour tended to be aggressive and impulsive, manifesting in worsening epilepsy and aggressive behaviour. All three patients received multiple medications including antipsychotics and antiepileptics. Due to the persistence of symptoms, every case was discussed in a multidisciplinary team, supported by the criteria for DBS for aggressive behaviour, and the ethical committee agreed on deep brain stimulation in the posterior medial hypothalamus. Criteria of DBS for aggressive and uncontrollable behaviour includes: to be diagnosed by two psychiatrists, non-response to treatment despite the highest dosage of at least five antipsychotic medications in an enough period of time to evaluate the response and the severe functional interference with the activities of daily living and maladaptive behaviour. All patients showed improvement after the procedure. The woman was released of physical restriction and she could go with her family, out of her house without being a risk for herself or for others. The benefits of the second case included control not only of the behaviour but also of seizures, diminishing medications for aggressive behaviour and also for epilepsy. In this case, voltage over 3.4 V showed hypo activity, with hyporexia, becoming extremely undernourished and requiring the reduction of the voltage to 3.2 V. The third case showed benefit and he could go back to school again, being able to control his aggressive behaviour as well as the epilepsy. The benefits account to around 70% in all cases, with parameters of stimulation between 3 and 3.4, pulse width of 60 and frequency of 130. DBS in the posterior medial hypothalamus can be a useful option in the control of uncontrollable aggressive behaviour. We also found benefit with better control of seizures in two patients with epilepsy.



Biography

Oscar Bernal-Pacheco obtained his Medical Degree from the National University of Colombia. He was a Neurologist at the Nueva Granada Military University, Colombia and a Fellow of the University of Florida at Gainesville (USA). Currently, he is a Professor of the Nueva Granada Military University, Central Military Hospital (Colombia), co-Director of the Movement Disorders Clinic in the Hospital Fundación Santafe de Bogotá and Instituto Ortopedico Roosevelt. He has been working on Deep Brain Stimulation (DBS) for patients with movement disorders such Parkinson's disease, and also for neuropsychiatric conditions. The wide clinical response to DBS has become the base to look for more than motor benefit in movement disorders and is more than previously described non-motor changes.

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