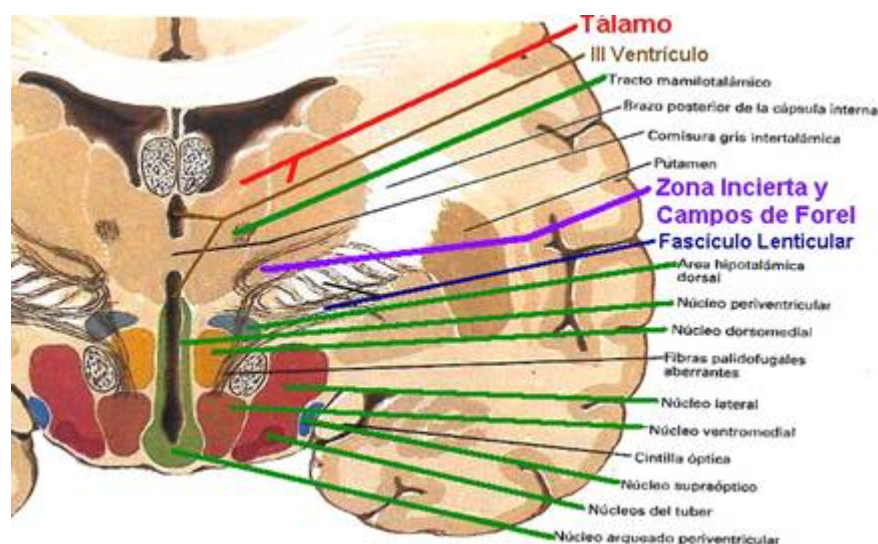


La Zona Incerta (ZI) es una banda de sustancia gris ubicada entre el tálamo y el fascículo lenticular.

La estimulación cerebral profunda de la zona incerta caudal, es un tratamiento relativamente inexplorado y prometedor en pacientes con temblor esencial severo, aunque los datos preliminares indican, que la fluidez verbal puede quedar afectada (Fyttagoridis y col., 2012).

Esta estructura, se sabe que recibe conexiones de la corteza cerebral motora primaria, sin embargo, sus eferencias son aún desconocidas.

- Sus principales aferencias provienen del segmento lateral del globus pallidus (fibras gabaérgicas), vía fascículo subtalámico.
- Por otro lado, sus principales eferencias son numerosas fibras excitadoras, que liberan glutamato al segmento medial del globo pálido.
- Lesiones en el núcleo subtalámico producen alteraciones motoras consistentes en movimientos involuntarios violentos y mantenidos de extremidades, y a veces de cuello y cara.
- La enfermedad llamada Hemibalismo se relaciona con este núcleo.



En la zona incerta y alrededores, las células descargan a baja frecuencia (<15 Hz) y presentan un potencial de acción de larga duración (>2 milisegundos; normalmente el potencial de acción varía de 1.1 a 1.6 milisegundos), en algunos casos con una muesca en una de sus ramas. Se distinguen en el altavoz ya que dan un típico tono, más grave que el de las células normales. Si bien las diferencias en la duración del potencial de acción de una neurona pueden parecer irrelevantes, pero son importantes para la identificación de la célula puesto que determinan el modo, delimitan la frecuencia de la descarga y su forma.

La estimulación bilateral de la ZI es segura y eficaz para suprimir el componente postural del temblor esencial (Plaha et al., 2011).

La cuestión de si la estimulación de la ZI puede limitar los efectos límbicos es desconocida, pero la evidencia preliminar es que mantenida en el tiempo puede mejorar los síntomas de depresión y ansiedad en pacientes con estimulación cerebral profunda bilateral (Burrows et al., 2011).

En un estudio comparativo de estimulación subtalámica versus zona incerta en solo 4 pacientes con temblor esencial, la estimulación de la zona incerta fué superior (Blomstedt y col., 2011).

En un estudio con 18 pacientes, las actividades de la vida diaria mejoraron en un 65,8%, y no hubo necesidad de aumentar la intensidad de estimulación (Fytagoridis y col., 2011).

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