Methodological aspects of deep brain stimulation

Statements

Belonging to the PhD Thesis

Methodological Aspects of Deep Brain Stimulation: The Untold Story Behind DBS Surgery

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1. The road to success in DBS therapy passes through the ability to cope with surgical and technical complications. (This Thesis).
2. The error sources in stereotactic DBS procedures that are linked to the human hand sensitivity have not been a serious research subject until today. (This Thesis).
3. To reach a high level of precision in stereotactic surgeries, there are several sources of potential error which should be taken into account. (This Thesis).
4. With MER, alternative trajectories are immediately available. The trajectory with the second longest and, if needed, the third longest STN activity can be used as alternative trajectories. (This Thesis).
5. MER procedure may be more valuable for the permanent electrode implantation of second side of a bilateral DBS surgery than the first side in order to compensate error sources that might arise intraoperatively. (This Thesis).
6. The success of the therapy relies on three main factors: the appropriate selection of patients, the accurate placement of the DBS lead in the sensorimotor regions of the target nuclei, and optimal choice of electrical parameters for stimulation. (William J. Marks, Jr)
7. Neurons that fire together, wire together. (Donald Olding Hebb)
8. We are just an advanced breed of monkeys on a minor planet of a very average star. But we can understand the Universe. That makes us something very special. (Stephen William Hawking)
9. I hated every minute of training, but I said, ‘Don’t quit. Suffer now and live the rest of your life as a champion. (Muhammad Ali)
10. A wizard is never late, nor is he early, he arrives precisely when he means to. (John Ronald Reuel Tolkien)