Should Deep Brain Stimulation be offered to Parkinsonian patients with pedophilia?
Sabine Müller, PhD, MSc, Berlin
Markus Christen, PhD, MSc, Zurich

**Background:** DBS experts, lawyers and medical ethicists discuss controversially whether it is justified to treat Parkinsonian patients with known or suspected pedophilia with DBS.

- DBS might cause impulse control disorders, disinhibition, and hypersexuality and thus increase the risk of sexual child abuse.

+ The beneficence for the patient has to be the first principle of medical treatment, not interests of society.
Methods:

- **Review of the literature** about mental changes and behavioral disorders of PD patients, particularly impulse control disorders (ICD) and hypersexuality, under medical treatment, after pallidotomy and after DBS

- **Ethical investigation** based on the principles of biomedical ethics (respect of the patient’s autonomy, beneficence, nonmaleficence, justice)

- **Legal investigation**: Research for lawsuits and comparison with analogous cases
Results:

Review of the literature
- DBS can worsen or cause the development of ICDs, hypersexuality and hypomania.
- Particularly for ICD, DBS can be an effective indirect treatment.
- The incidence of positive and negative outcomes of DBS on impulsivity seems to be nearly the same.

Ethical evaluation
- Evaluation according to the principles of biomedical ethics: An intervention which could cause or enhance a disposition for sexual offenses against children is unethically, if such a disposition is either caused against the patient’s will (autonomy) or causes suffering of the patient (nonmaleficence).
- But if an increased disposition for sexual offenses against children conforms to the patient’s will and does not harm him, the principles of biomedical ethics do not ban a treatment that increases such a disposition.
- Therefore, an additional ethical principle has to be applied which forbids interventions which will harm third persons (nonmaleficence for third persons): According to this principle, DBS must not be applied if there is a significant risk that it makes the patient dangerous for third persons.
Results:

Legal evaluation
- No legislation regulates this issue.
- Restrictions in one hospital would not hinder patients at risk to receive DBS somewhere else; therefore a consensual solution is necessary.
- DBS-influenced behavioral disorders can be parallelized with disorders caused by an involuntary intoxication with prescribed drugs.
- DBS patients who commit crimes might be mitigated for insanity.
- If a DBS patient is accused of a sexual offense and found legally incompetent because of an iatrogenic inability to control himself, the treating physician might be judged to have a joint guilt.

Consequences
- Benefits and risks of the treatment for the patient and for third persons should to be balanced.
- A very careful selection of patients is necessary which assesses also foreseeable changes in personality, impulse control, and sexual behavior.
- We propose a three-step strategy how to deal with patients at risk: (1) risk assessment, (2) shared decision-making, (3) risk management and safeguards.
Conclusion: Proposed strategy for Parkinsonian patients at risk

Risk assessment

Case 1: no severe risk factors
- No DBS

Case 2: risk factors appeared after disease onset or dopaminergic treatment
- Shared decision making: negative
  - No DBS
- Shared decision making: positive
  - Risk management and safeguards
  - Ulysses contract + DBS

Case 3: risk factors appeared before disease onset or dopaminergic treatment
- Ulysses contract
  - Regular psychiatric consultations
  - Stimulation parameters optimized for motor and mental functions
  - DBS can be stopped or modified by physicians
- No DBS