

## **VAGUS NERVE STIMULATION SHOULD BE ROUTINELY OFFERED AFTER FAILURE OF 2-3 AEDS IN PATIENTS WHO ARE NOT CANDIDATES FOR RESECTIVE SURGERY – NO**

**Andreas Schulze-Bonhage**

*University Hospital Freiburg, Germany*

Patients in whom several AED have failed are potential candidates for epilepsy surgery. The main reasoning behind this consensus is that often epilepsy surgery offers chances for seizure freedom which are 5-10 times as high as if medical therapy would be continued. If patients are refractory to 2-3 AEDs, vagus nerve stimulation is certainly an option. The overall efficacy of VNS, however, is not higher than with the introduction of an AED as add-on therapy: chances for a 50% seizure reduction are in the range of 30%, and complete seizure control may be achieved in some 5% of patients. Costs of the stimulator, lead and the surgical procedure are high, and the patient has to undergo a surgical procedure with some risk of infection or vocal cord irritation. If a patient is a non-responder to VNS (i.e. in two thirds of patients implanted), the surgical procedure has been in vain, and costs are a lot higher compared to an antiepileptic drug which can easily be replaced by another. Would we choose to pay the price of any AED with similar efficacy for a period of 3-5 years ahead of knowing its effect and duration of use?

VNS does offer advantages in terms of tolerability; in particular, it does not cause cognitive slowing and has positive effects on mood. But we now have several 2<sup>nd</sup> generation AED with a similarly promising safety profile.

As long as responders to VNS are not well predictable, very early use of VNS appears premature. Furthermore, the major advantages of VNS, its lack of interactions with medical therapy and its good tolerability, become more relevant at a later stage of therapy when combination therapy has failed and side effects of high-dose antiepileptic therapy increasingly impair the patients' quality of life.