

Epidural Recordings of Auditory Evoked Potentials in Cochlear Implant Users – First Experiences

Abstract

On the long term it is desirable for cochlear implant (CI) users to control their device via brain signals. For an everyday life application it is convenient to use implanted electrodes for recording the signals. In this pilot project we investigate in a first step the feasibility of implanting epidural electrodes temporally and the possibility to record auditory evoked potentials (AEPs) in the course of several days. First recordings in three patients show promising results. Altogether the approach is feasible, safe and well tolerated by the patients, and the AEP waves can be clearly seen.