IMMUNOTHERAPY AGAINST BETA-AMYLOID IN ALZHEIMER'S DISEASE

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Immunotherapies targeting brain beta-amyloid are currently tested for safety and efficacy in patients with Alzheimer's disease (AD). Initial attempts with active Abeta immunization were halted because of the development of meningoencephalitis in a subgroup of patients, but follow-up studies established that Abeta immunization induced chronic elevations of antibodies against beta-amyloid. These are transported across the blood brain barrier into brain tissue and cerebrospinal fluid. In patients who had developed such antibodies, cognitive decline was slowed, brain beta-amyloid load was greatly reduced, and shrinkage of hippocampus volume was prevented. These initial beneficial clinical effects were independent of the prior occurrence of meningoencephalitis. Together, these pilot data suggest that chronically elevated titers of antibodies against beta-amyloid in AD patients could be safe and potentially efficacious in reducing the decline of cognitive functions, hippocampus tissue loss and beta-amyloid-related neuropathology.