

A brain bank in the U.S.A. based on brain donation

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要旨

献脳は研究用にヒト脳試料を確保するには必要で、健常者高齢者脳も確保できる。ドナーが研究のために自らの意思で脳を提供するのは、倫理的には最善の策である。米国アリゾナ州の高齢者しか住めない Sun Cities にある Sun Health Research Institute Brain Bank は献脳に基づき、1987年にアリゾナ州認可のもとに設立され、2005年8月末までに1550名が登録し、これは人口の1.9%で、800名がすでに剖検脳を研究に提供した。剖検率は88%、離脱率は年平均1.9%、postmortem interval は平均2.8時間（最長でも3時間以内）、剖検者のうち臨床評価がなされている者82%、年間の平均剖検数は51例であった。ドナーの臨床診断はアルツハイマー病12%、健常者高齢者57%で、神経病理診断はアルツハイマー病62%、正常コントロール21%であった。鳥取臨床科学 1(1), 199-211, 2008

Abstract

Brain donation is required to reposit autopsied brains, including healthy aged ones, in brain banks for studying human brain disorders. Brain donation is ethically the best way because people donate their brains with their own wills after death. The Sun Health Research Institute (SHRI) Brain Bank established in 1987 is a repository of autopsied brains based on donation. Until August 2005, 1550 elderly persons that are 1.9% of the citizens in Sun Cities have enrolled, and 800 elderly persons (51 per year) have already been autopsied, being the autopsy rate of 88%, the cancellation rate of 1.9% per year, and the averaged postmortem intervals of 2.8 hours. 12% of the donors were clinically diagnosed as having Alzheimer's disease, and 57% to be normal. Neuropathologically, 62% were diagnosed as having Alzheimer's disease and 21% to be normal control. The SHRI Brain Bank provides a number of neuropathologically normal control cases. This is one of advantages of the donation-based brain bank. The cases diagnosed clinically to be nondemented but neuropathologically as having typical Alzheimer's disease, referred as high pathology control cases, are even more important resources for Alzheimer research. That is other advantage in the donation-based brain bank. *Tottori J. Clin. Res.* 1(1), 199-211, 2008

Key Words: 献脳, ブレンバンク, Sun Health Research Institute, 死後剖検時間, アルツハイマー病; brain donation, brain bank, Sun Health Research Institute, postmortem interval, Alzheimer's disease

本論文は、ブレインバンクの先進国である米国のアリゾナ州において、州の認可のもとに機能している Sun Health Research Institute (SHRI) brain

donation program を概説するものである。その経緯、現状、今後の展望を知ることが、日本のブレインバンクの確立に大いに役立つことを期待す