

【文献調査】**An unbiased data-driven age-related structural brain parcellation for the identification of intrinsic brain volume changes over the adult lifespan**

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2018年1月13日

1 タイトル

成人期の脳内容積変化同定のための不偏データ駆動型の年齢関連的構造的脳解剖

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3 出典

NeuroImage, Volume 169, 1 April 2018, Pages 134-144

4 アブストラクト

本研究は、偏りのないデータ駆動型の構造的脳分割によって、成人の年齢に関連する内因性の脳容積変化を解明することを目的とする。21-86歳の健常成人293名の解剖学的脳画像を、独立成分分析(ICA)を用いて分析した。ICAベースの解析により、192の脳領域が同定された。そのうち90.6%の174領域の体積は、年齢と有意な負の相関を示し、一部の領域は他の領域よりも老化の影響を受けやすいことが示唆された。また、7つの領域は老化とともにU字の変化を示した。このうち3領域は逆U字の変化を示し、4領域はU字の変化を示した。86の領域の線形結合モデルにより、約7.2年の平均絶対予測誤差を有する年代の予測が行われた。構造的ネットワークの共変動分析により、半球間の結合について負の相関が示された。全体的に、これらの知見は、健常成人の脳老化に関する研究に貢献し、年齢に関連する神経変性疾患と正常な老化過程を区別するための枠組みを提供するのに役立つ可能性がある。

5 キーワード

Healthy aging, Brain parcellation, Brain-age prediction, Independent component analysis, Structural co-variation analysis

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