

Case Based Learning – Dementia

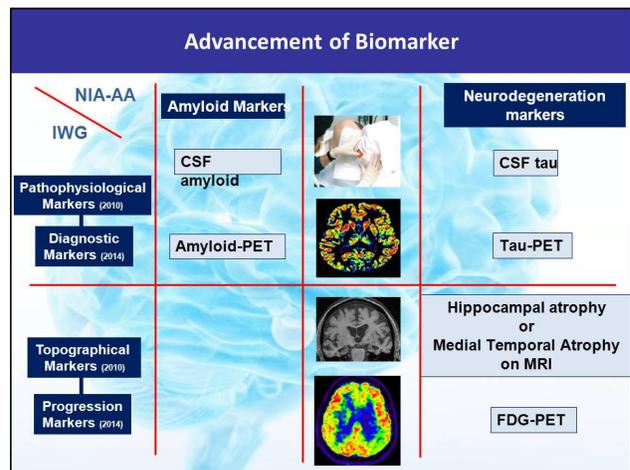
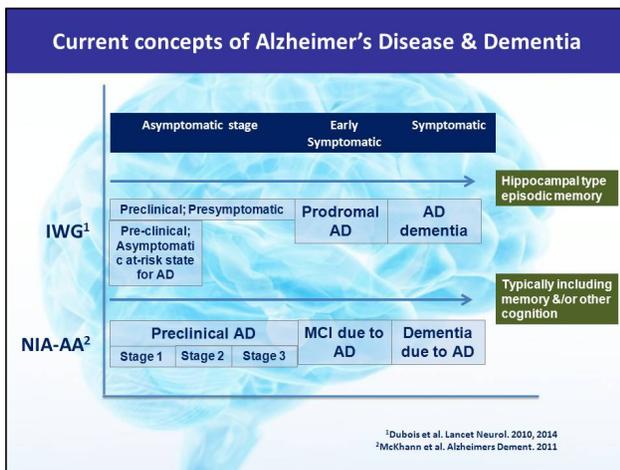


박기형

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알츠하이머 치매 (FC119S)

C-11 PIB

- C-11 labeled compound
- β -amyloid imaging agent; standard compound
- Due to short half-life time (20 min), commercialization is difficult.
- GE Healthcare has IP

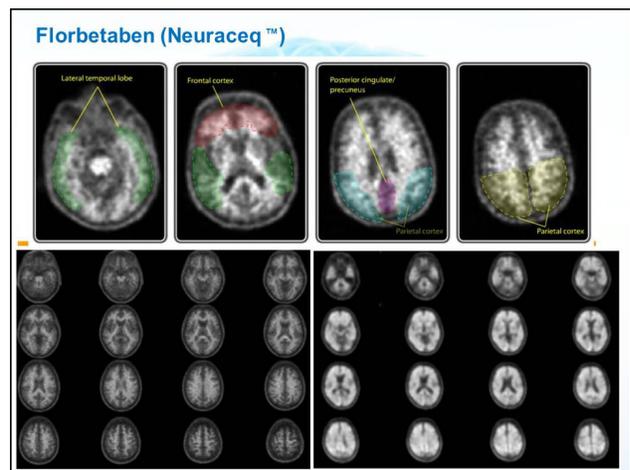
Flutemetamol (Vizamyl™)

- GE Healthcare
- NDA at USA (2013.10.25)
- Low synthetic yield and long synthetic time

Florbetaben (Neuraceq™)

- Piramal
- NDA at EU, USA (2014)
- Bayer Healthcare sold to Piramal imaging 2012.05

Florbetapir (Amyvid™)



Flutemetamol (Vizamyl™)

- 5가지 영역 중 한 곳 이상에서 cortical uptake가, 우편측 or 좌측 → 주황색 or 붉은색 으로 변화됨 을 관찰¹⁾
- 5가지 영역¹⁾
 - frontal lobes
 - posterior cingulate and precuneus
 - lateral temporal lobes
 - parietal lobes
 - striatum
- 하나의 region 이상에서 Positive를 보이면 해당영상은 positive로 구분됨¹⁾

GE Healthcare, Images on file.

Alzheimer's & Dementia ■ (2013) 1-15

Alzheimer's & Dementia

Appropriate use criteria for amyloid PET: A report of the Amyloid Imaging Task Force, the Society of Nuclear Medicine and Molecular Imaging, and the Alzheimer's Association

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Appropriate Clinical Scenarios

- Patients with persistent or progressive **unexplained MCI**
- Patients satisfying core clinical criteria for **possible AD** because of unclear clinical presentation, either an atypical clinical course or an etiologically mixed presentation
- Patients with progressive dementia and atypically **early age of onset** (usually defined as 65 years or less in age)

Suggested Appropriate Use

- A cognitive complaint with objectively confirmed impairment
- AD as a possible diagnosis, but when the diagnosis is uncertain after a comprehensive evaluation by a dementia expert
- When knowledge of the presence or absence of A β pathology is expected to increase diagnostic certainty and alter management.

Alzheimer's & Dementia 2013 : 1-15

Inappropriate Uses

- Patients with core clinical criteria for probable AD with typical age of onset
- To determine dementia severity
- Based solely on a positive family history of dementia or presence of APOE ϵ 4
- Cognitive complaint not confirmed by examination
- Instead of genotyping for suspected mutation carriers
- In asymptomatic individuals
- Nonmedical use (e.g., legal, insurance coverage, or employment screening)

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