



# Case

ESIM, Sardinia

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# History

- Acute functional decline the last 2 weeks. Started with dyspnoea, coughing and change of behavior.
- Contacted doctor that started with steroids (prednisolon) and antibiotics (trimetoprim-sulfa) with effect.
- Increased confusion and aggression home.
- Contacted doctor that concluded with delirium and started with risperidon.
- Wife contact doctor and the patient where hospitalized because of difficult to control at home. Sleep little, desorientated and leave the house during the night. Visual hallucinations on a boat.

# History

- Family:
  - 69 year old man. Wife, 2 children.
  - Previous sailor.
  - Live in an apartment.
  - Day center 5 days every week due to dementia.
- Previous sickness:
  - Asthma as child, later COPD.
  - Behavior disturbance in childhood. Left school. Criminal behavior, in prison. Suicid with tablets in the 1970's. Used benzodiazepines and opioids (paracetamol/kodein) the last 35-40 years.
  - Moderate dementia.
  - Appendectomi 1962. Bleeding ulcus ventriculi x2 in the 1970's. Operated glandula submandibularis right side due to adenoma 1988. Falled down from ceiling and fractur L1 1991.

# History

- Drugs:
  - No alcohol for a long time.
  - Smoking.
  - Use to much benzodiazepine and opioids.
- Clinical examination
  - Overweight, not orientated. He has hoarseness.
  - Hemofec positive after 4 secunds.

# History

- Has moderate dementia of uncertain type, possible dementia with Lewy-bodies, use though benzodiazepines and previously alcohol. Has not parkinsonism.
- Has not driver licence.
- Separated steroids and antibiotics when he was hospitalized.

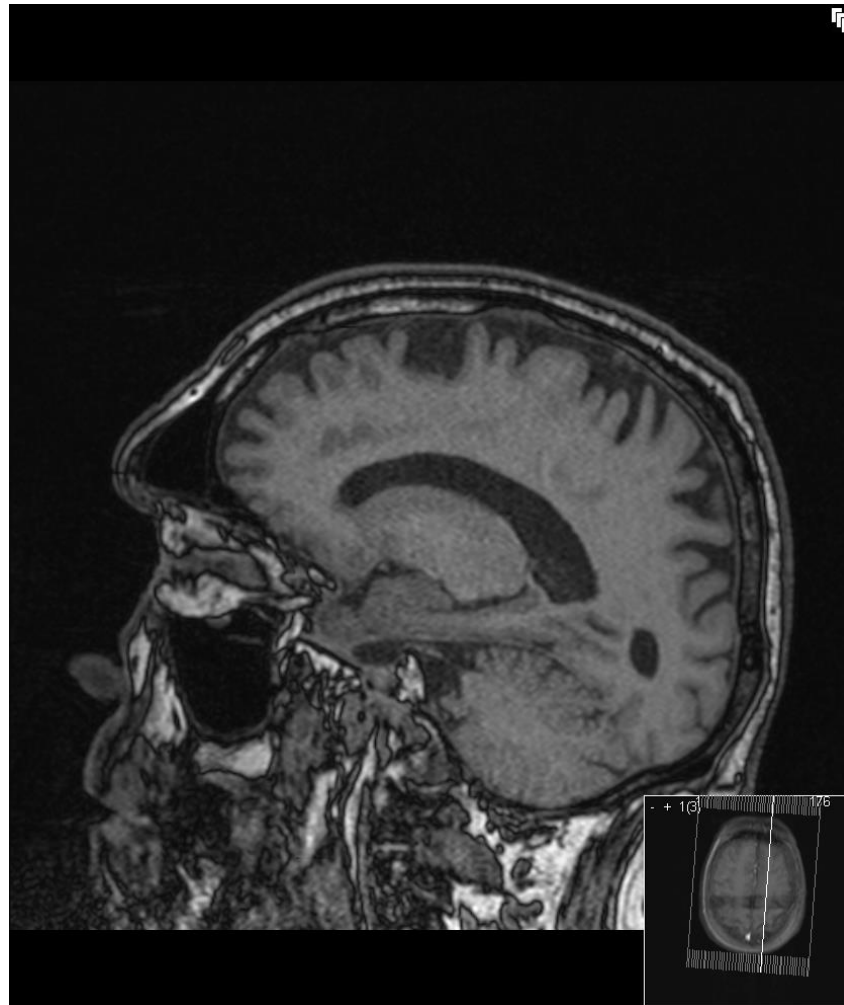
# Supplementary investigations

- Blood tests:
  - Normal.
- Gastroscopi: gastritis and esohagitis. Started PPI (pantoprazol). Negative Helicobacter pylori.

# Supplementary investigations

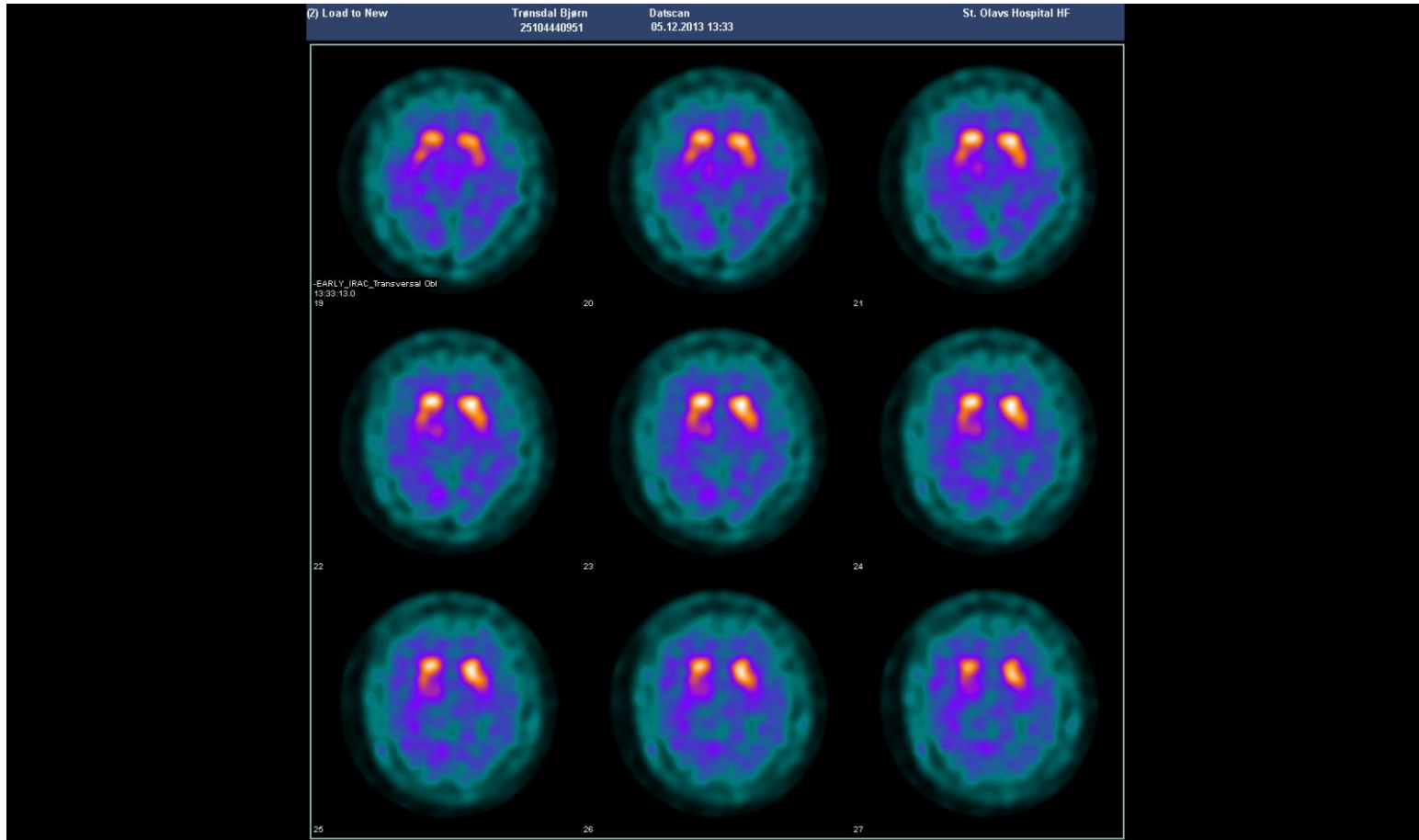
- Rtg thorax: normal.
- CT collum/ thorax/ abdomen/ bekken: old compression fracture L1, no malignity.
- MR caput: generalised central and cortical atrophy most frontal and Fissura sylvii. Normal hippocampus. No vascular lesions or bleeding.
- Brain Datscan SPECT: global reduced recording in basal ganglia. Because not parkinsonism it can be seen with dementia with Lewy-bodies.

# MR caput



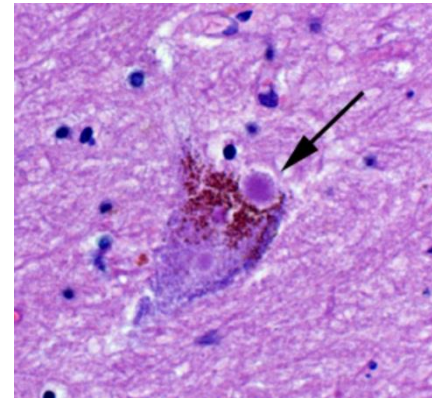


# Brain Datscan SPECT



# Dementia with Lewy-bodies – pathology

- Round, eosinophil intracytoplasmatic neuronal inclusions after FH Lewy first described in 1912. Found in Substantia Nigra, locus ceruleus, hypothalamus and sympatic ganglion.
- Lewy bodies is hyaline with a central protein core.
- Same pathology with Dementia with Lewy bodies and Parkinson disease.



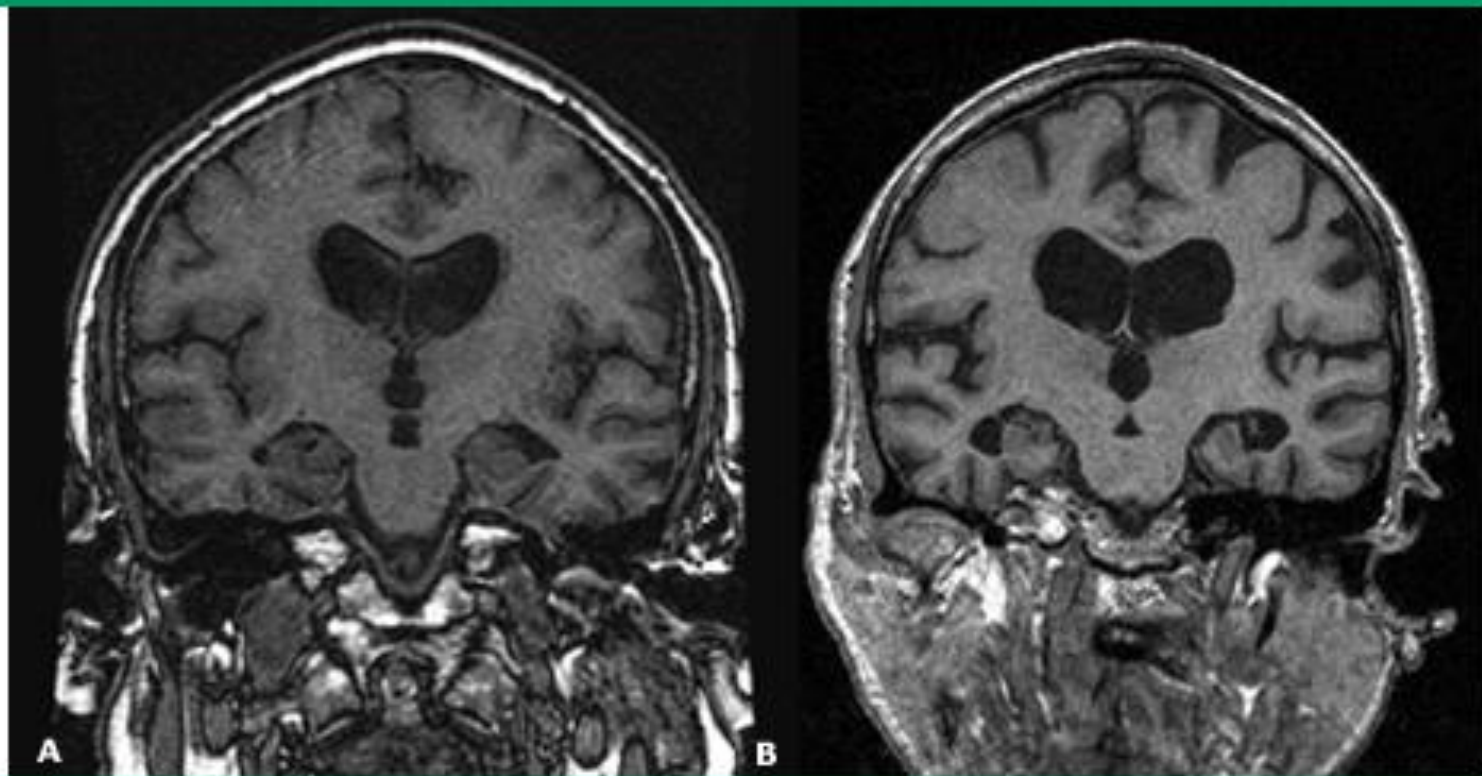
## Clinical and radiologic features of dementia with Lewy bodies (DLB)

	Frequency in DLB (percent)*
<b>Central feature (essential for the diagnosis)*</b>	
Progressive cognitive decline, dementia	100
<b>Core features (two features essential for diagnosis of probable DLB, one for possible DLB)*</b>	
Fluctuating cognition	60-80
Recurrent well-formed, detailed visual hallucinations	50-75
Spontaneous features of parkinsonism	80-90
<b>Suggestive features (one suggestive feature with one core feature may diagnose probable DLB, one or more suggestive features may diagnose possible DLB)*</b>	
REM sleep disorder	85
Severe neuroleptic sensitivity	30-50
Low dopamine transporter uptake in basal ganglia on SPECT or PET	
<b>Supportive features (common features with undetermined diagnostic specificity)*</b>	
Repeated falls	33
Syncope or transient loss of consciousness	
Severe autonomic dysfunction	
Hallucinations in other modalities	20
Systematized delusions	55-75
Depression	30-40
Relative preservation of medial temporal lobe on MRI or CT	
Generalized low uptake on SPECT or PET perfusion imaging with reduced occipital activity	
Abnormal (low uptake) MIBG myocardial scintigraphy	
Prominent slow wave activity and temporal lobe transient sharp waves on EEG	
<b>Conflicting features (features which make DLB less likely)*</b>	
Cerebrovascular disease evidenced by focal neurologic signs or neuroimaging	
Other physical illness or brain disorder which is consistent with some or all of clinical features	
First appearance of parkinsonism at late stage (severe) dementia	
<b>Temporal sequence (feature which distinguishes DLB from Parkinson disease dementia)*</b>	
Dementia should occur before or concurrently with onset of parkinsonism	

\* References for frequency provided in text.

• Consensus criteria of the third report of the DLB consortium. McKeith IG, Dickson DW, Lowe J, et al. Diagnosis and management of dementia with Lewy bodies: third report of the DLB Consortium. Neurology 2005; 65:1863.

## MRI appearance of dementia with Lewy bodies compared to Alzheimer disease



Thin section coronal T1 weighted images from a 61-year-old male with pathologically proven Dementia with Lewy bodies (A) and a 69-year-old male with Alzheimer disease (B). There is relative preservation of the medial temporal lobes and hippocampal structures in the DLB patient as compared with the AD patient.

# Sources

- Patient
- UpToDate
- Ballard et al; Treatment of dementia with Lewy Bodies and Parkinson's disease dementia, *Drugs aging* 2011;28(10):769-777