

Delirium



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Legen Rune Larsen (60) var sikker på at han skulle kokes da han ble innlagt på sykehuset



Foto: Marita Aarekol

SPECIAL ARTICLE

acta Anaesthesiologica Scandinavica

Just a little delirium- A report from the other side

Rune Arild Larsen 

Acta Anaesthesiol Scand. 2019

1

Kva er delirium?

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4



DSM-5 criteria for delirium

A	A disturbance in attention (i.e., reduced ability to direct, focus, sustain, and shift attention) and awareness (reduced orientation to the environment).	→	Attention Awareness
B	The disturbance develops over a short period of time (usually hours to a few days), represents a change from baseline attention and awareness, and tends to fluctuate in severity during the course of a day.	→	Acute change Fluctuate
C	An additional disturbance in cognition (e.g. memory deficit, disorientation, language, visuospatial ability, or perception).	→	Disturbance in cognition
D	The disturbances in Criteria A and C are not better explained by a pre-existing, established or evolving neurocognitive disorder and do not occur in the context of a severely reduced level of arousal, such as coma.	→	Not «only» dementia
E	There is evidence from the history, physical examination or laboratory findings that the disturbance is a direct physiological consequence of another medical condition, substance intoxication or withdrawal, or exposure to a toxin, or is due to multiple etiologies	→	A direct consequence of another medical condition

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Kor vanleg er delirium?

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Delirium in an adult acute hospital population: predictors, prevalence and detection

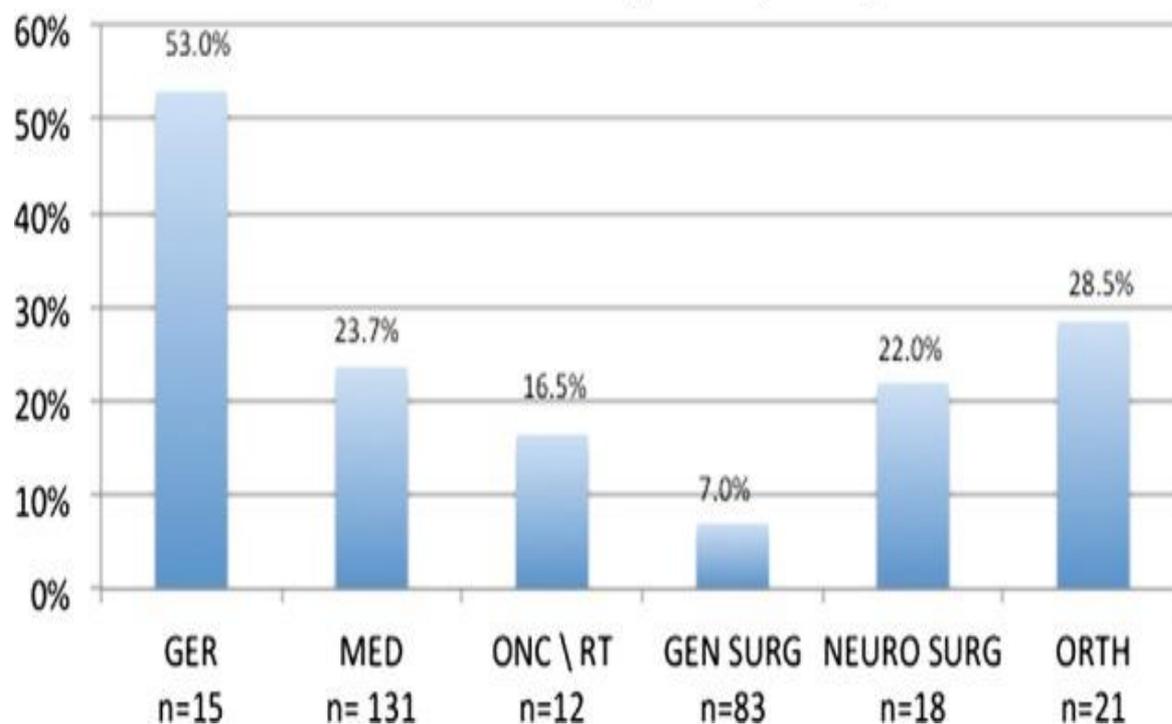
-Cork University Hospital, Ireland: 407 acute adult inpatients beds

-15th of May 2010 were all patients assessed for delirium

-19,6 % had delirium

Only 43,6% had delirium or one of its synonyms documented in the case notes!!

Delirium Prevalence by Ward (n=280)



3

Risikofaktorer

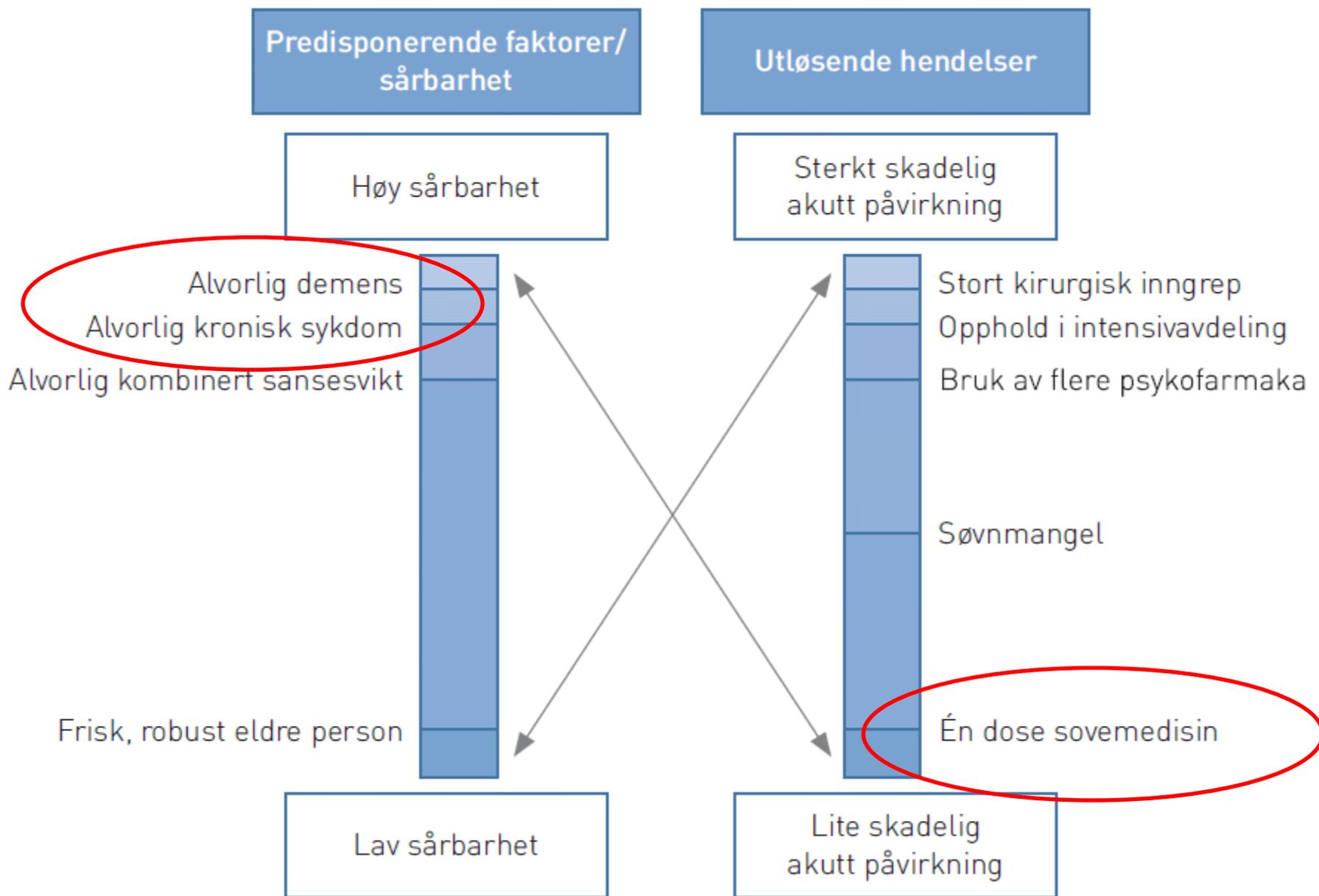
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Korleis er delirium og demens
knytta saman?

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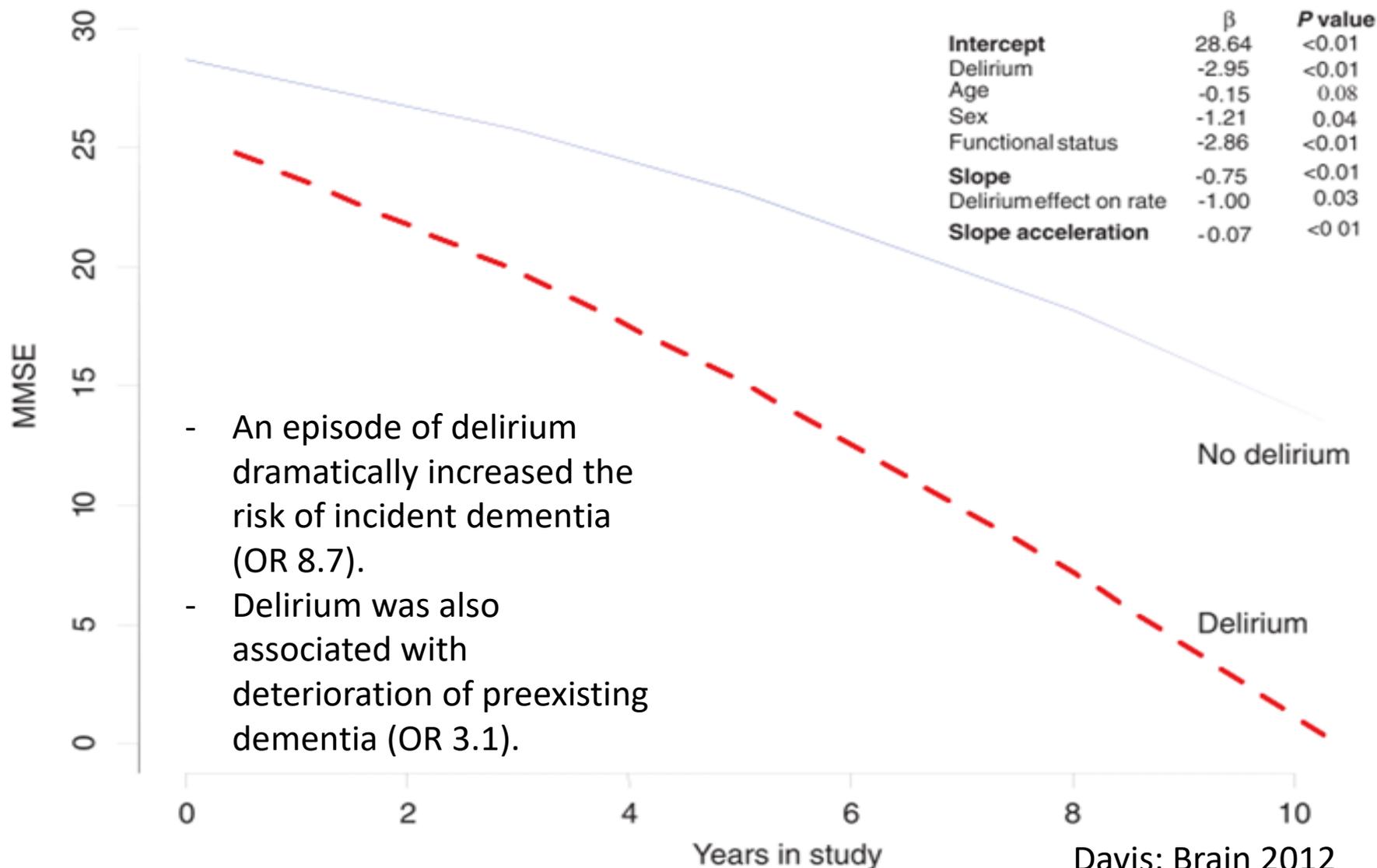
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Delirium is a strong risk factor for dementia in the oldest-old: a population-based cohort study



Potential mechanisms for how delirium could lead to dementia

1. Delirium unmasks unrecognised or preclinical dementia

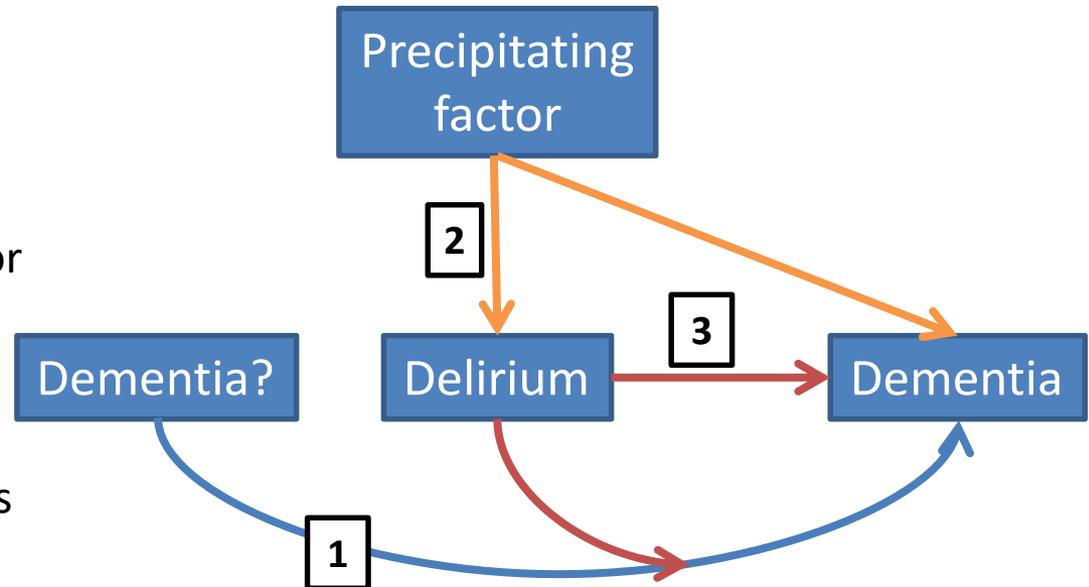
Dementia pathology responsible for further decline

2. Common shared precipitating factor

Sepsis, surgery, drugs

3. Delirium independently contributes to dementia

Pathophysiology unknown



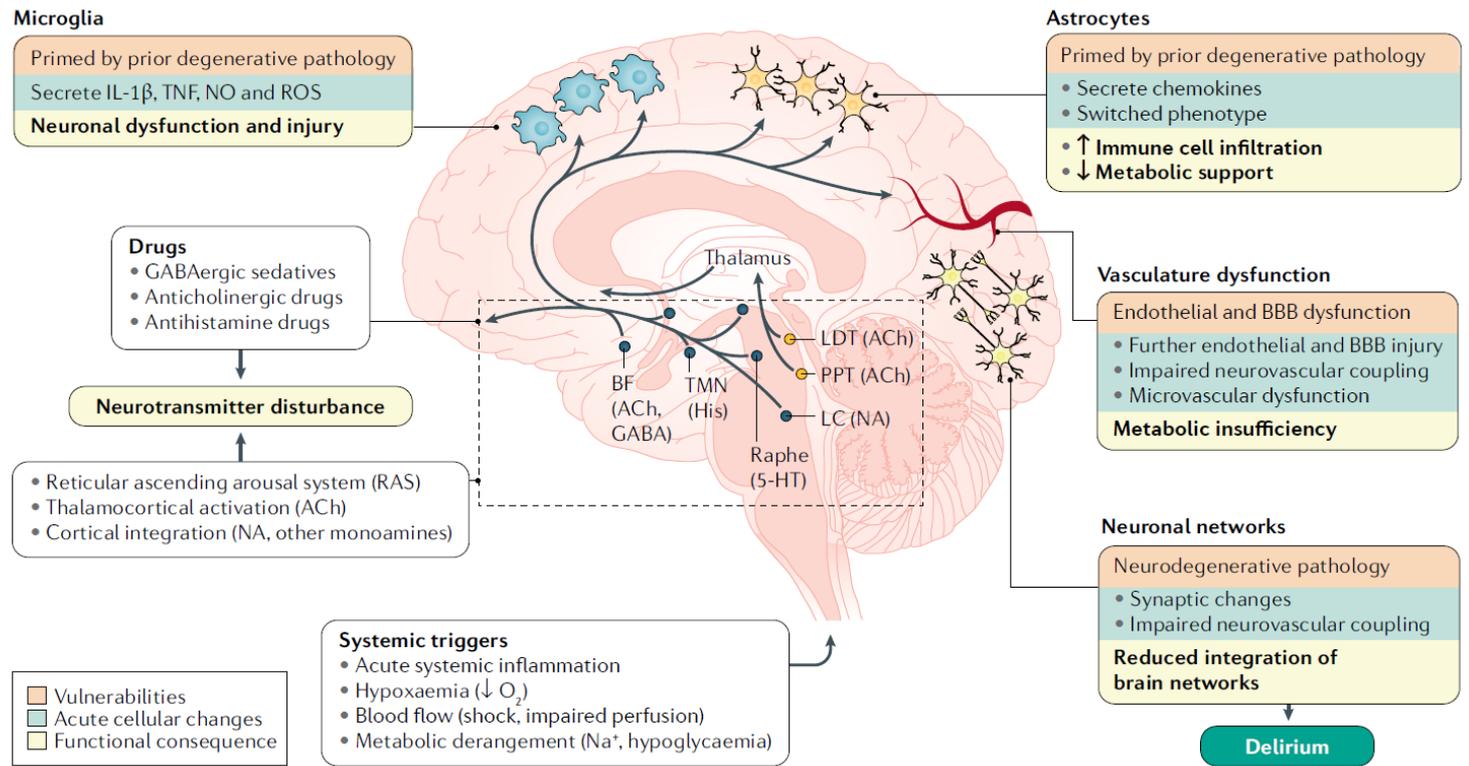


Fig. 4 | **Major mechanisms in delirium pathophysiology.** Major perturbations leading to delirium during acute illness include robust acute mediators can directly affect neuronal function but also act directly on astrocytes. Astrocytes can also be primed during chronic brain pathology,

Delirium

Jo Ellen Wilson^{1,2}, Matthew F. Mart^{1,3}, Colm Cunningham⁴, Yahya Shehabi^{5,6}, Timothy D. Girard^{1,7}, Alasdair M. J. MacLulich⁸, Arjen J. C. Slooter⁹ and E. Wesley Ely^{1,3,10,11}

RESEARCH

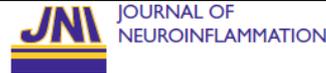
Open Access

Perioperative cerebrospinal fluid and plasma inflammatory markers after orthopedic surgery



Jan Hirsch^{1,2*}, Susana Vacas¹, Niccolo Terrando¹, Miao Yuan³, Laura P. Sands³, Joel Kramer⁴, Kevin Bozic⁵, Mervyn M. Maze¹ and Jacqueline M. Leung¹

Bromander et al. *Journal of Neuroinflammation* 2012, 9:242
<http://www.jneuroinflammation.com/content/9/1/242>



RESEARCH

Open Access

Changes in serum and cerebrospinal fluid cytokines in response to non-neurological surgery: an observational study

Sara Bromander^{1,3,5*}, Rolf Anckarsäter^{1,2}, Marianne Kristiansson³, Kaj Blennow¹, Henrik Zetterberg¹,

scientific reports



OPEN

Cytokine changes in cerebrospinal fluid and plasma after emergency orthopaedic surgery

Michael Fertleman^{1,4*}, Christopher Pereira^{1,4}, Melanie Dani¹, Benjamin H. L. Harris², Matteo Di Giovannantonio² & Simon D. Taylor-Robinson³

Bromander, J Neuroinflammation 2012

Hirsch, J Neuroinflammation 2016

Fertleman, Sci Rep 2022

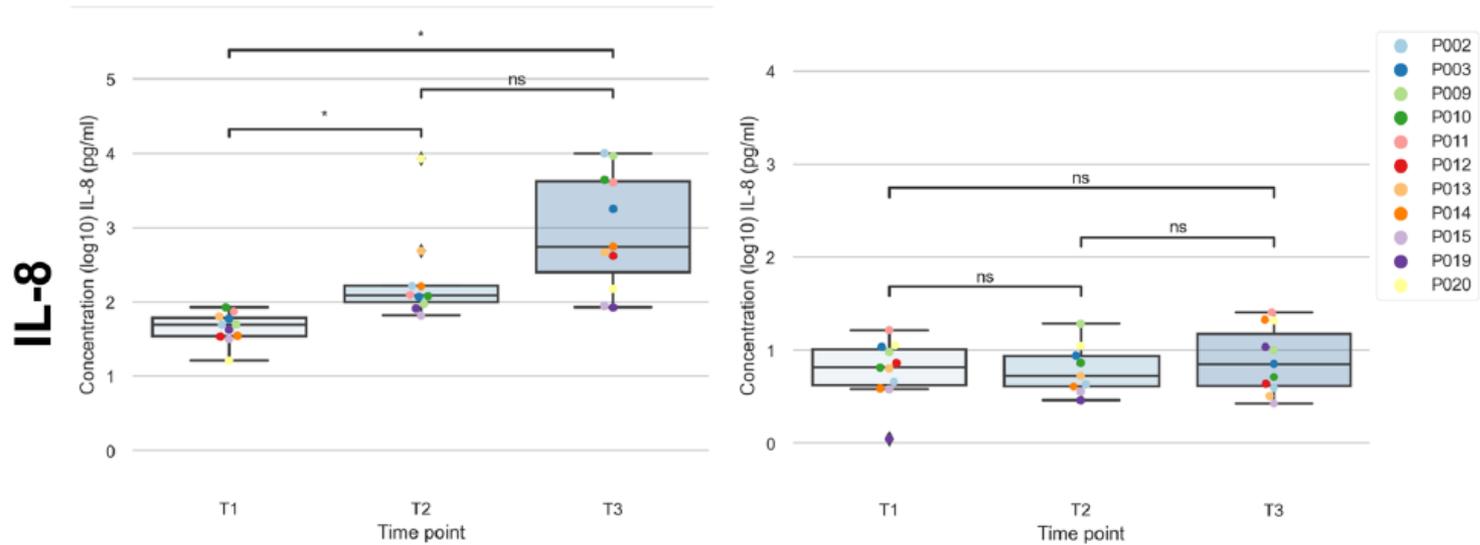
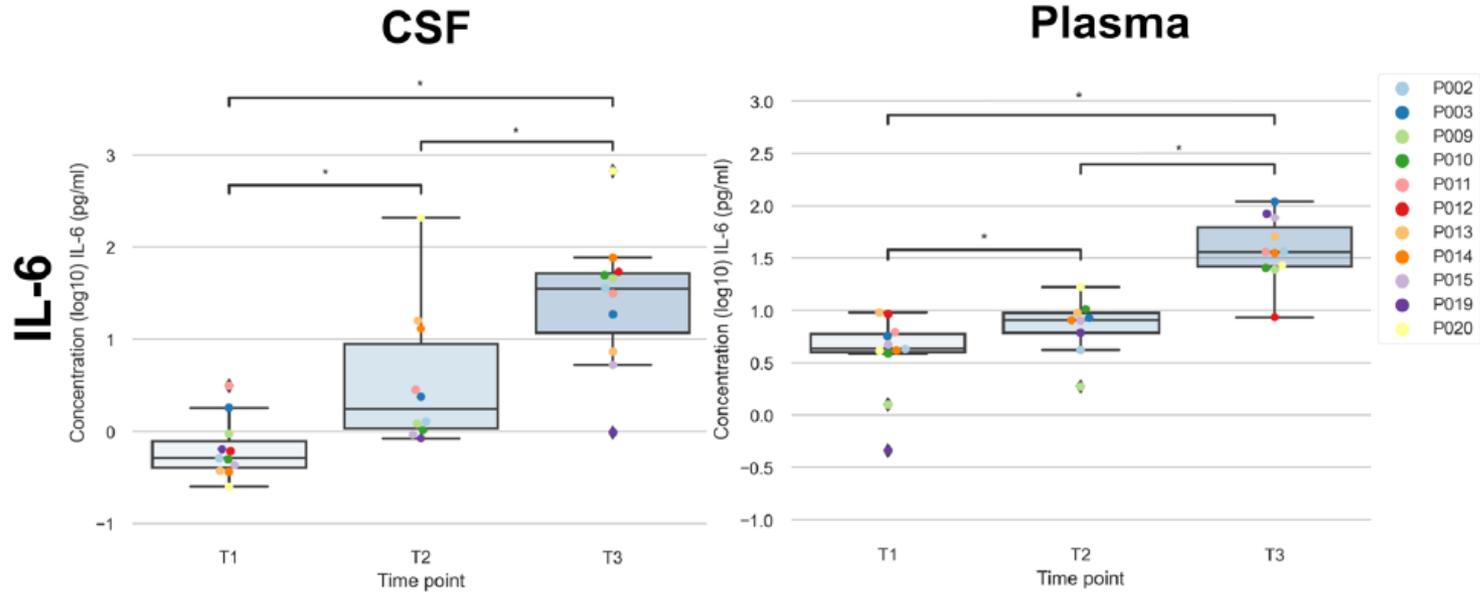


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Cytokine changes in cerebrospinal fluid and plasma after emergency orthopaedic surgery

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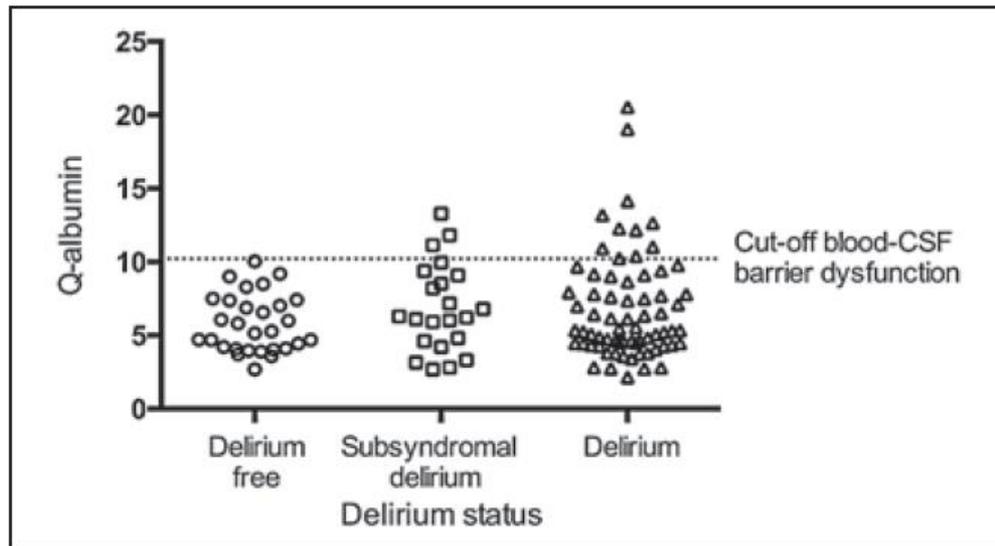
- 11 hip fracture patients recruited during 18-months
- CSF collected (spinalcatheter) before, immediately after and on the first post op day.
- 10 cytokines measured. All 10 rose significantly in CSF and 5 in serum. The greatest increases occurred in IL-8 in CSF and IL-6 in plasma.
- Central (CSF) cytokine levels were consistently higher than their peripheral (plasma) counterparts after surgery
- No correlation between CSF and serum.



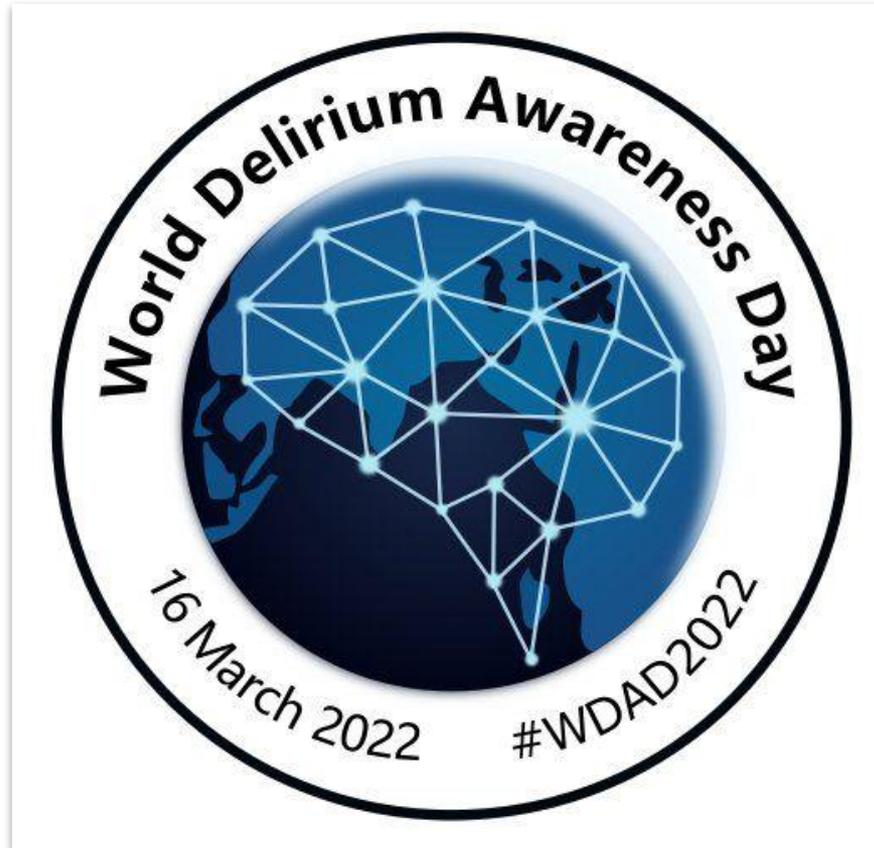
Q - albumin

$$\frac{\text{CSF albumin} \times 1,000}{\text{serum albumin}}$$

Q-albumin >10.2 cutoff for blood-cerebrospinalfluid
dysfunction



Hov et al, Dement Geriatr Cogn Disord, 2016



[iDelirium | American Delirium Society](#)