EVER PHARMA

STROKE

TBI

NEUROCOGNITIVE DISORDERS

Webinar EVER Pharma

Treating cognitive decline after critical illnesses

A Call to action

September 13, 2022

Cerebrolysin®

Reconnecting Neurons.
Empowering for Life.

Webinar EVER Pharma (September 13, 2022)

Treating cognitive decline after critical illnesses

A Call to action

SPEAKERS

Michael Brainin

Chair and Director, Department of Neurosciences and Preventive Medicine, Danube University Krems, Austria

Wes Ely

Pulmonary and Critical Care and Health Services Research, Vanderbilt University, Nashville, USA

Mark Bayley

UHN-Toronto Rehabilitation Institute, University of Toronto, Canada

INTRODUCTION

The webinar on September 13th included three lectures on

Cognitive deterioration after stroke
by Michael Brainin

Cognitive Decline after Critical Illness – Current evidence and new treatment strategies
by Wes Ely

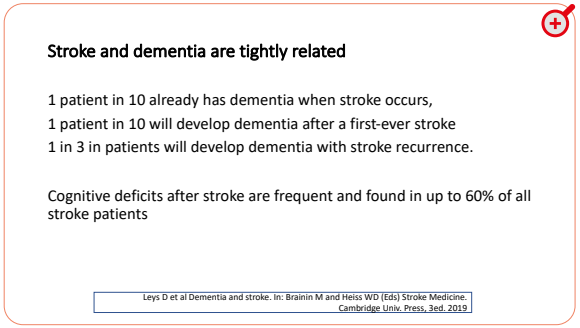
Assessment and Management of the long-term cognitive sequelae of TBI
by Mark Bayley

The aim was that this topic should attract much more attention from doctors worldwide. In the report you can find the summary of the 3 short presentations.

Cognitive deterioration after stroke

by Michael Brainin

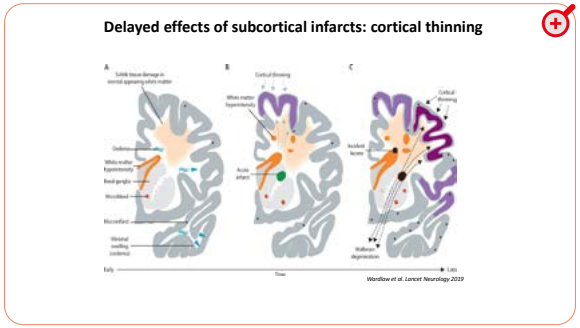
First speaker was Michael Brainin who introduced his topic by showing the magnitude of the **epidemiological problem**.



Then he moved on to explain the **reasons for post-stroke cognitive decline** such as

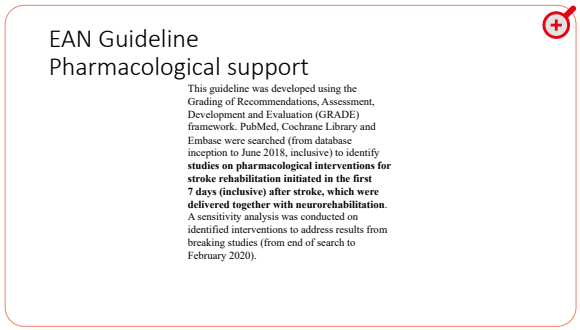
- pre-existing vascular damage
- pre-existing Alzheimer's disease
- small vessel disease or
- strategic infarcts; these are strokes that are located in brain areas such as the thalamus, the parietal cortex, or the cerebellum and lead to an immediate loss of cognitive functions.

Brain atrophy plays a major role in the development of cognitive decline after stroke as well – a fact which was also highlighted in the lecture by Wes Ely.

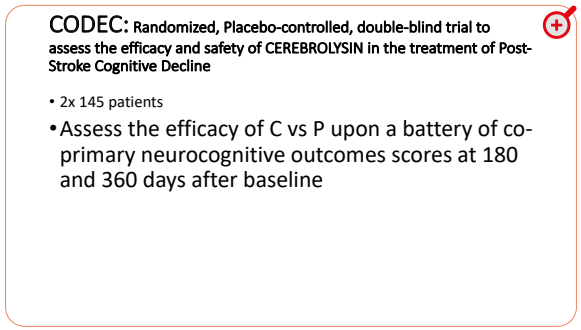


In the 2nd part of his lecture, Michael Brainin discussed the increasing **evidence for Cerebrolysin** as a neurorestorative agent with properties that can positively influence the treatment of post-stroke complications. Neurorepair mechanisms are essential when neuronal damage has already occurred, with treatment strategies not limited to very short time windows, as in thrombolysis.

In this context, Michael Brainin mentioned the key results of the pivotal CARS trial, as well as the latest guideline recommendations, in particular the recent inclusion in the EAN guideline.



Finally, he presented a **new randomized clinical study, the CODEC study**, which assesses efficacy and safety in post-stroke cognitive decline in 290 patients with an observation period of up to 360 days.

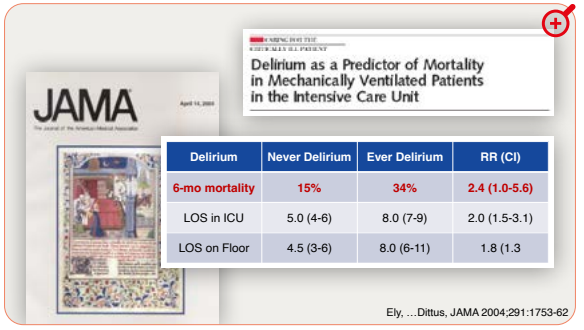


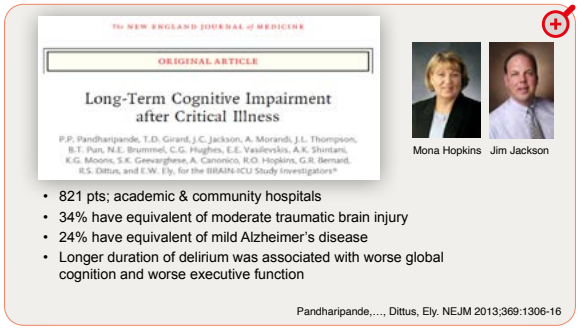
Cognitive Decline after Critical Illness – Current evidence and new treatment strategies

by Wes Ely

In the introduction of the 2nd lecture, Wes Ely pointed out the importance of **combating neuroinflammatory processes** in the brain, which frequently develop in many critical illnesses such as delirium or COVID, and provided the basis for understanding why an active substance like Cerebrolysin can play an important role in this field of medicine.

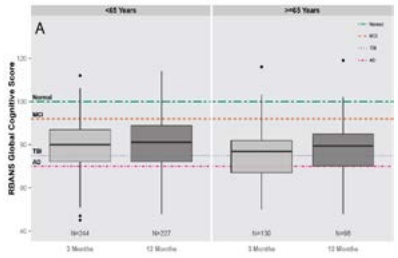
Wes Ely continued his lecture by focusing on the **existing evidence** of the catastrophic consequences that delirium can have on long-term cognitive decline and mortality. It is particularly noteworthy in this regard that Wes Ely already had the idea a few years ago to use Cerebrolysin in the intensive care unit to prevent the onset of cognitive decline.



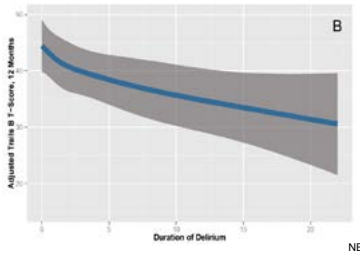


In this context, Wes Ely clearly pointed out that pharmacological agents that influence the severity of delirium and the associated cognitive problems remain an essential research focus and that **Cerebrolysin could be a very effective drug** for patients with critical illnesses.

The Picture of Dementia Following ICU Care



Delirium and Executive Function



NEJM 2013;369:1306-16

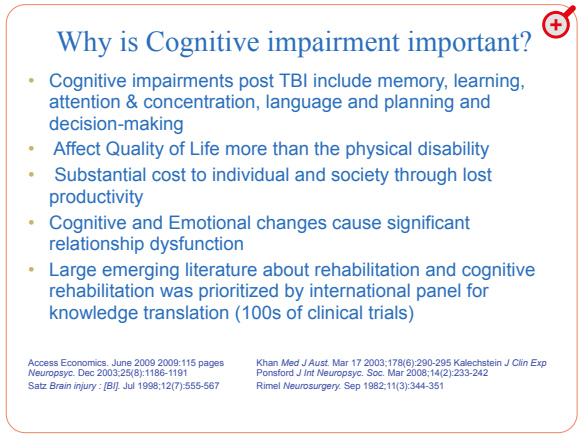
In summary, it should be noted that several research groups are currently **conducting clinical studies with Cerebrolysin** in the intensive care unit or develop protocols that address precisely the problems of cognitive decline after critical illnesses, in particular delirium.

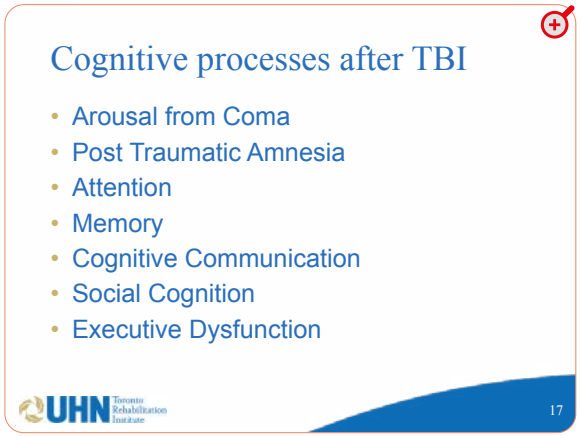
Assessment and Management of the long-term cognitive sequelae of TBI

by Mark Bayley

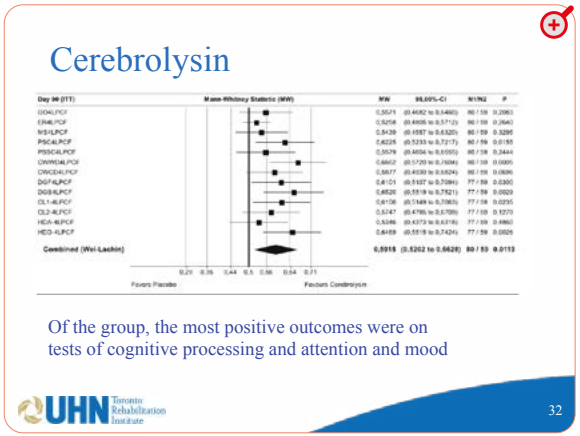
Mark Bayley began his presentation by pointing out why it is so important to **focus on cognitive decline** after traumatic brain injury, and he emphasized that these problems are still underestimated worldwide, which makes a 'call to action' so relevant.

Mark Bayley presented the **different cognitive domains** that may be impaired after a traumatic brain injury, and he presented a medical decision algorithm for these different domains. It is important to point out that this flowchart dates back to the year 2014, a few years before the CAPTAIN studies showed strong evidence of improvement in cognitive domains after TBI.





Mark Bayley briefly discussed the **results of the CAPTAIN studies**, mentioning in particular the significant overall improvement, especially those focusing on attention, memory and mood.



Then he hypothesized that Cerebrolysin could be especially helpful in patients with diffuse axonal injury, since these patients have problems with processing and other cognitive functions after TBI.

In his conclusion, Bayley summarized that the most **problematic issues for people after a brain injury in the long-term** are related to depressed mood, cognitive and emotional changes, professional activity/productivity, and interpersonal relationships.

Particularly two main pathologies trigger cognitive dysfunction:

1. Diffuse axonal injury and
2. Focal injury

which might be specific therapeutic targets for Cerebrolysin in clinical practice and research.

ABBREVIATED PRESCRIBING INFORMATION. Name of the medicinal product: Cerebrolysin - Solution for injection. Qualitative and quantitative composition: One ml contains 215.2 mg of Cerebrolysin concentrate in aqueous solution. List of excipients: Sodium hydroxide and water for injection. Therapeutic indications: For treatment of cerebrovascular disorders. Especially in the following indications: Senile dementia of Alzheimer's type. Vascular dementia. Stroke. Craniocerebral trauma (commotio and contusio). Contraindications: Hypersensitivity to one of the components of the drug, epilepsy, severe renal impairment. Marketing Authorisation Holder: EVER Neuro Pharma GmbH, A-4866 Unterach. Only available on prescription and in pharmacies. More information about pharmaceutical form, posology and method of administration, special warnings and precautions for use, interaction with other medicinal products and other forms of interaction, fertility, pregnancy and lactation, effects on ability to drive and use machines, undesirable effects, overdose, pharmacodynamics properties, pharmacokinetic properties, preclinical safety data, incompatibilities, shelf life, special precautions for storage, nature and contents of the container and special precautions for disposal is available in the summary of product characteristics.

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